Music & Letters

A Quarterly Publication

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Music and Letters

JULY, 1923

VOLUME IV.

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THE TEXTURE OF MODERN MUSIC.-II

Sir Toby: But shall we make the welkin dance indeed? Shall we rouse the night-owl in a catch that will draw three souls out of one weaver? Shall we do that?

Sir Andrew: An you love me, let's do't: I am a dog at a catch

Malvolio: My masters, are you mad? Have you no wit, manners, nor honesty . . . that ye squeak out your cozier's catches without any mitigation or remorse of voice? Is there no respect of place, persons, nor time, in you?

Shakebpeare: Twelfth Night.

The exploitation of masses of sound rather than of threads of melody, and the consequent tendency to seek expression as much in contrasts of quantity as in refinements of quality, were consistent features in the music of the nineteenth century. This is the music we inherit, and so far as our own music is predominantly harmonic and dynamic we may merit neither praise nor blame. It would, however, be a serious omission on the part of an observer if he were to accept these tendencies without question, neither enquiring as to their origins, nor asking whether the circumstances which engendered or encouraged them are or are not still prevalent.

The nineteenth century was a period of great material expansion, and in this expansion music had a share. At the beginning of the century it was mainly the concern of the cultured few; at the end it had conformed to the democratic tinge which permeated the whole society of Europe and America. The drawing-room of a noble, the small theatre of a Court, the assembly room of an exclusive circle, gave way to the public opera house and concert hall. The

chamber-orchestra of Mozart became the concert-orchestra of Strauss. Where Beethoven addressed hundreds, Wagner eventually addressed thousands, and it is not surprising that large and heterogenous audiences should have encouraged vigorous and uncompromising speech. Of the multiplication of voices and instruments it is hardly necessary to speak. We play the clavichord-music of Bach on the modern grand piano, the symphonies of Mozart on the orchestra of Strauss. What is lost in delicacy is, perhaps, gained in breadth, and the incidental incongruities which are revealed in all processes of arrangement, whether conscious or unconscious, do not concern our immediate subject.

There are, however, certain material factors which appear to have had specific and definable effects on the actual texture of our music, and of these two may be taken as typical. They are both closely connected with the development and popularity of keyboard instruments; the first being a consequence of equal temperament in tuning, the second arising from the application of the keyboard to an instrument of markedly dynamic type.

Equal temperament made easy the use of extreme keys. That was its justification. The mediæval modes were dead; music was, for better or worse, allied to systems of key relationships; and the widening of these relationships was the obvious path of advance. Extended movements were based on an architecture of keys, and incidental modulation was one of the most fertile methods whereby a composer could exhibit his command of technical resource, or exercise the vigour and originality of his fancy.

What then became of the so-called " natural " instruments, instruments like the horn and trumpet, which were physical embodiments of one tonality, and of one only? All the wood-wind instruments had limitations of a related kind. They were built in a particular key and for a long time they had to be used with due regard to the mechanical difficulties which extreme modulation might create. The clarinet preferred from the first to be a transposing instrument, a change of instrument being the only alternative to the provision and manipulation of a very complex mechanism, a mechanism which could never be more than supplementary to the normal boring of a particular diatonic scale. It is true that horn and trumpet could play a first subject in C major and, after a short interval for a change of crook, could appear again in E flat or some other key. But the continuity of parts was lost irretrievably, and incidental modulations were inherently impossible. The most that could be done was to reinforce such arbitrary notes as happened to have an equivalent in the natural scale of the instrument, with an effect which was at best clumsy and at worst grotesque. The horn and trumpet parts of the classic symphonies are frequently of a type that had never before been admitted into the domain of serious music.

It is interesting to recall in this connection the famous false entry of the horn in the first movement of the "Eroica" symphony (Ex. 21). Would it be too much to say that the very rigidity of the instrument, as it existed in his day, played a considerable part in Beethoven's inspiration?



Thus Beethoven defied his limitations and endorsed a clash of tonalities; and the success of so bold an experiment is, from the point of view of our own day, curiously prophetic.

The incisive tone of certain instruments needs special treatment. Some of them have great powers of emphasis. But in Bach's hands all instruments had to be melodious. There could be no barking and biting at notes which were devoid of logical sequence. And the dexterity with which the later symphonists dovetailed "natural" instruments into an alien texture should not blind us to the arbitrariness of the whole process. All instruments became chromatic during the nineteenth century, but their earlier limitations remained for a long time embodied in a tradition that fed on the very disabilities from which great composers had suffered. When Beethoven modulated to a distant key he was compelled to leave part of his orchestra behind. When he returned, increased fullness of texture was unavoidably sudden. Effects of mass and of emphasis were thus fortified by classical practice, and continued to be unduly exploited long after their original justification had become obsolete. Even now too many musicians, creative and executive alike, appear to regard certain instruments and groups of instruments as primarily the vehicles of a kind of super-splash in the harmonic fabric. And the vehemence to which some instruments can be excited has been carried, by not a few composers of repute, to a point with which only an African drummer can compete.

This is one of our legacies. Another is the pianoforte. The piano would not be so omnipresent in the modern practice of music had it not offered substantial merits. Chief of these is the power it shares with all keyboard instruments of combining many parts in one performer. The pianist is himself a concert, in the literal sense of that word. To the complexities which the piano can suggest, and to the music which, to our ears at least, it will tolerably reproduce, there is practically no limit. The Elizabethans wrote music "apt for voices or viols." To us everything is "apt" for the piano. The discriminating may protest, but the broad fact remains.

Yet the piano has at least three major limitations. It is an instrument of percussion, it is confined to a hand-technique, and it is intonation-proof. Melody on the piano is akin to melody on kettledrums, to melody on bells. The piano is a mechanical dulcimer. Apart from the actual noise of the hammer-blows, obvious on a bad instrument and by no means inaudible on a good one, the melodic power of the piano is of a very peculiar kind. Every note is an explosion, followed by a rapidly failing vibration. We can discount the noise as we can discount the scratch of a gramophone. We reinforce imaginatively the failing vibrations. But the instrument retains none the less its fundamentally dynamic quality. Throughout early history serious music was an affair of the voice, or of instruments which aspired to be vocal, whether bowed or blown. The primitive harp, and still more, the primitive drum, had no part in the growth of music, from melody to polyphony. This polyphony, representing the golden fruit of centuries of labour, was applied to the keyboard. With the keyboard it fought an heroic but unquestionably a losing battle. There was no help for it. The keyboard had come to stay, and many of the instruments to which it was allied were negations of all that polyphony had hitherto implied. We still pay the old music tribute, for our minds idealise the graduated but none the less clumsy explosions of the piano into memories of the sustained melody which to most of us is the essence of music. But the ubiquity of a dynamic keyboard cannot be without serious reactions on standards of texture, and it is not merely fortuitous that the century which adopted the piano adopted also an increasingly quantitative idea of values.

The hand-technique of the piano is, whether good or bad, inevitable. All instruments have such limitations, and it is within them that an art wins its spurs. But in this respect also the piano thrives on chords, not on counterpoint. The playing of true polyphony is very difficult, and the result often ambiguous at best. Chords are only too easy, within the compass of the hand. And it is a commonplace of

criticism that the piano classics are full of crude splashes of hand-music as raw and ugly as anything in the whole history of technique. A thick splash in the bass combined with a thin splash at a remote distance in the treble—this was an accepted formula. (See the reduction given in Ex. 23 below, which omits an accompaniment of close arpeggios, all within the octave first given in the bass.) Beethoven's clumsiness is forgotten in the grandeur of his ideas, but the music of lesser men may come too often from the hand rather than from the head. The endless octaves of the piano, in particular, are devices of emphasis as barren artistically as anything music can show.



Ex. 22 gives two modern specimens which it is impossible not to regard as "hand-music." Such things may be justified to some extent in their context, but when the characteristic hops and skips of the piano, and the arpeggios which are properly fitting to it are incongruously imported into other spheres—and they are not unknown even in music which presumably aspires to be sung—then it is time to open one's ears.

A third characteristic of keyboard instruments is perhaps most significant of all. They are peculiarly suited to the tone-deaf. The notes are ready made. All that is required of the performer is sufficient mental and physical agility to make eye and hand follow the notation. The ear has no essential function in the production of the notes, and all the other processes involved can be tolerably executed by a mechanical player. From this follow two important reactions.

In the first place, whatever combination of notes can be imagined, whatever can be written down, can be reproduced in essentials without further difficulty. The writer does not have to rely exclusively on the accuracy of his aural imagination, or wait until singers or players can be found who are able and willing to produce the combinations be desires. The composer's mind is still, of course, the true creative

medium, but the piano offers him an ideal field for experiment. By its means he can cultivate his harmonic sense to a very high degree. breaking as much new ground in a year as his fathers did in a century. And in like fashion those who would follow the processes of his thought can learn quickly by means of the piano to tolerate or to enjoy dissonances and complexities which a lifetime of purely orchestral or choral experience might not render familiar to the same degree. Take the chord Ex. 22 (b) above. It is easy to play on the piano as it stands, in isolation. To reproduce it chorally on the same terms would require ten singers, each gifted with absolute pitch and uncommon powers of concentration. Failing such endowments, the singers would have to approach the chord by means of ten separate melodies, every one of which would have to display sufficient coherence to enable the singer to grasp and hold his particular element in the fabric. This was the contrapuntal method, the vocal method. May one say the musical method? It was the method that the keyboard could dispense with.

Secondly, and to the same degree, keyboard music, so far as it is unvocal, demands from the singer or orchestral player, whose province it invades, precisely that automatic and mechanical intonation which the keyboard provides. All cultivated singers and stringed or wind instrument players complain that modern music is too frequently of a type utterly foreign to their particular medium. They have been educated to make their own notes, to appreciate niceties of intonation and quality, to be, in fact, intelligent interpreters of an intelligible part. When they are asked to behave like automata, they are docile perhaps, but none the less bewildered. And this attitude goes deeper than the mere question of technique. Modern music often finds capable performers. The pity is that it so rarely leaves them inspired.

Considerations such as have been thus briefly indicated are directly related both to characteristic features in contemporary music and to the pace at which they have developed. Should the twentieth century do no more than consolidate the ground it has already explored, it would still show a marked originality. Yet many of its tendencies were at least latent in its predecessors, and so far as the complexity and condensation of harmonic idiom is concerned, to-day is but the child of yesterday. Can the same be said of all our experiments? Is there a classical justification for our deliberate multiplication and confusion of tonalities, for instance; for chords of which one-half is frankly A major, and the other half just as frankly E flat minor?

Ex. 21 above is very exceptional, but there is one classical device which does occur frequently and which implies at least a partial confusion of keys. This is the use of pedal-points. The pedal-point is presumably descended from the drone of certain primitive instruments. It is found in every kind of music from the very earliest times, and since our key system became fixed its function has been quite clearly that of preserving the atmosphere of a particular key in spite of the modifications or modulations that might occur in the harmonic superstructure. And this process logically involves a clash of tonalities. The following examples are typical. Numerous examples in Bach will also occur to the reader, though these are generally less modern in feeling because their texture is more contrapuntal. The modern method is uncompromisingly harmonic.



Ex. 23 is from Beethoven's Opus 110. It is bold, but orthodox. Ex. 24 is condensed from the second act of Parsifal. It begins classically, but becomes increasingly ambiguous. Ex. 25 is from Elgar's Cockaigne. It has the modern bluntness of speech, and it illustrates incidentally that rigidity of style which has already been noticed as belonging to "natural" brass instruments. Ex. 26 is a mere fragment of the long dominant pedal with which Richard Strauss closes variation X of Don Quixote. The reader should study the whole passage as it occurs in the work. It may fairly be said to represent the greatest complexity which this classical device had reached by the end of the last century.

It will be noticed that not only do the dissonances become more acute in the later examples, but that the composer is more and more inclined to emphasise them, to dwell on them, to make the clashes of tonality undisguised. Chords like that in the last bar of Ex. 26 may, so long as they are held unresolved, be made the foundations of extended passages in which two clearly defined keys are simultaneously emphasised and exploited. Thus multiple tonality in a comparatively extreme form may be closely linked with classical tradition.

But it is a commonplace of musical history that the preparation and resolution of discords are never more than temporary dilutions of statement. Composers and public alike will drink their wine neat at the earliest possible moment. And there is no increase of incidental complexity that will not sooner or later dispense with the logical process that first gave it birth, and arrogate to itself an independent and intrinsic value. The chord we have just referred to is a typical case. It should resolve classically as in Ex. 27 (a), and so it does resolve eventually in Don Quizote. Ex. 27 (b) shows a little further complication, yet it also resolves classically as stated.



But Ex. 27 (b) gives us A major plus E flat minor. Why disguise the fact? Why seek to minimise the effect of it by preparation or resolution or other temporary palliative? Strauss, by the time he

reached *Elektra*, had made the kind of step that all musicians are constantly making throughout their experience. He had learnt to leave out everything which to him was inessential, and he writes bluntly:



The chord in Ex. 27 (a) has become remarkably popular as a vehicle for effects of ambiguous tonality, and it repays analysis. The elements of it occur in countless passages, of which the following, transposed from Bach, is one that also shows a characteristic use of a pedal-point.



Note in Ex. 28 (a) chords three and four. In the textbooks they occur as in Ex. 28 (b). The first is a "Neapolitan" sixth, the second one of its condensed resolutions. Strauss "telescoped" them as in Ex. 28 (c). And below are given a few contemporary statements of the same idiom.



They are taken from Holst: "Hymn of Jesus" (29a), Ravel: "Jeux d'Eaux" (29b), and Stravinsky: "Pétrouschka" (29c).

Stravinsky has no hesitation in using such harmonic syntheses in their most bare and striking form. Thus he also writes in "Pétrouschka":



Ex. 30 (a) is played by two solo clarinets at a moment of intensity in the action. Ex. 30 (b) is given to two bassoons and is presumably comic. But the path from the sublime to the ridiculous is of the same diminutive length, whether measured forwards or backwards; and a truth may begin in jest. Thus Bartók can write quietly and lyrically:



The tonal ambiguity that can be extracted from many of the chords discussed in a previous article, chords classically derived, but involving great harmonic complexity, needs no demonstration. It will be sufficient to note, as an exceptional case, the telescoping of major into minor. The method condenses Schubert's beautiful alternations, though Strauss' expressive "false relations" (Ex. 32 (a) is from the "Symphonia Domestica") into Stravinsky's final word on the subject. (Ex. 32 (b) is from "Le Sacre du Printemps," and was given more completely in Music and Letters, January, 1923.)



The derivations already given explain historically a few of the complications of tonality which are now current, but there is another method of approach, at once more original, more fertile, and more promising, which deserves close attention. It may perhaps be defined approximately as the evolution of harmonic counterpoint. The conflict of styles, harmonic as against contrapuntal, which occupies so central a position in the history of music, and the final result of which was to all appearances the victory of the former, has reached a new phase, a phase which may be destined to incorporate both harmony and counterpoint in an inclusive whole. An example from Strauss' Salome will make the definition clear:



The theme in the upper stave of Ex. 33 suggests a simple diatonic harmonisation. It is thus treated in various forms earlier in the work. But at a moment of crisis in the drama Strauss "harmonises" it by means of the chords given below it. The theme still retains its diatonic character, and its thirds practically define simple harmonies. Meanwhile the accompaniment moves to a point outside the diatonic atmosphere and at the moment of separation (*) we are given a glimpse of what were at that time new and strange lands. The impression is the more vivid in that both streams of harmony meet again at once, and the vision dissolves as it arose. This is harmonic counterpoint. The melodic threads of the contrapuntist have become composite streams of harmony, and these streams may approach and recede, coalesce or clash, just as did the individual parts of polyphony.

The evolution of this texture has obvious analogies with the tentative experiments that elaborated organum from plain-song, and counterpoint from organum. The tenth century wrote:



The twentieth century writes:



To Otger, of Hucbald, or whoever wrote Musica Enchiriadis, Ex. 34 was a combination of two melodies, Ex. 35 of three. From the point of view of the development we are now discussing, and ignoring for the time being the pedal points which here as elsewhere act as a kind of north-star to the adventurous composer, Exs. 36 and 37 (Debussy: "La Cathédrale engloutie," and Holst: The Planets: "Mars") represent single strands of thought. The curiously intimate relation of these typical passages to various technical factors is very significant. They frankly "side-slip" in any required direction, and although the sound-medium for which they are written may be either a single keyboard or a combination of soloists, it is difficult to avoid the thought that for harmonies which thus slide about in blocks the hand of the pianist or organist is an ideal agent.

We have two hands, and even if we had not, it could not long have escaped the notice of our inventive century that harmonic streams of this kind might well be combined. And it is in precisely this fashion that some forms of multiple tonality first find expression. A delightful example occurs in Stravinsky's "Pétrouschka": Ex. 38. It is diatonic, like Debussy's Ex. 36 above, and this gives its incidental combinations a flavour which is perhaps as much modal as multiple. But it is easy to see how violent the impacts of such contending masses could be made.



Stravinsky did not invent the method. It can be found in essentials in passages from the works of other and older composers. Strauss, in particular, frequently organised passing effects of this kind. There are suggestions of it at the end of Ex. 33 above, and for a thoroughly daring exploitation of chords moving in oblique or parallel blocks, the reader may be referred to the Battle-section of "Ein Heldenleben," a work written in the 'nineties. What distinguishes the twentieth century is its increasing ruthlessness. Strauss would often make detailed modifications in his chord-streams in order to bring the total effect within a comparatively respectful distance of what used to be called harmony. Our contemporaries have no such reservations. The harmonic columns march boldly on their way, and they ignore or defy traditional good manners just as the early pioneers of counterpoint did. The latter shattered the select hierarchy of consonant intervals by promoting thirds and sixths. Our young reformers bombard the citadels of the classics with a shrapnel of dismembered keys. The motto of both revolutions is the same : " Ca ira."



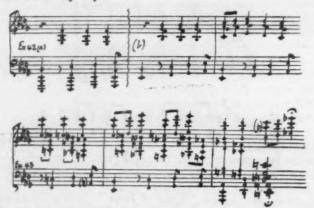
Ex. 39 is from Holst's "Hymn of Jesus." It is a daring and at the same time a highly successful example of choral exploration. The parts begin consonantly and end consonantly, and they can therefore be sung accurately. Ex. 40 is from one of Goossens' piano pieces.

But there is one major restriction which is common to all the examples just quoted. Their constituent streams consist exclusively of common chords. Why should the method be thus cabined and confined? There is no logical reason, and a mind that has travelled thus far will not hesitate to take the next step and use other and vol. IV.

more complex chords in the same way. The following is typical of a texture used freely by Goossens and others:



The stages by which a certain degree of finality may eventually be reached are clearly outlined in one of the sections in Stravinsky's "Le Sacre du Printemps." Ex. 42 (a) may be called the "key" of the section. The bass is constant throughout. Ex. 42 (b) shows a simple diatonic tune presented in parallel strands which form harmonies to which Ex. 42 (a) is the key. This is the first superstructure. Ex. 43 adds a third and internal "harmonic counterpoint," which is curious in itself, and against which the other elements are remorsely driven without the slightest apparent regard for traditional euphony.



It is difficult to account for so deliberate a choice and so crude a use of extreme intervals, except on the ground of sheer harmonic satiety. Successions of major sevenths, such as are found in Stravinsky's internal accompaniment above, are already becoming in certain circumstances a kind of cliché fairly comparable to the consecutive fifths and fourths of organum. Major sevenths are tonally ambiguous and are therefore strong meat. But philosophers are agreed that, dull as eternal bread and butter may be, eternal plum cake is worse.

As thus practised, is not the whole method clearly Hucbaldian in its present stage of development? Out of it may come technical means as fertile in beauty as those of classical polyphony. But it may fairly be said that this consummation is not yet. How far it is "devoutly to be wished" will depend on the gifts that posterity may bestow on it.

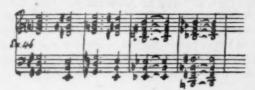
Just as chords built on traditional foundations became in time conventionalised and accepted as "points of rest," so, too, the chords evolved by incidental clashes of tonality are now frequently used without further elucidation. A passage from Goossens' choral work: "Silence," shows this development of technique in a comparatively mild form. Note that old and well-proved sheet-anchor, the pedal.



But movements can now begin with chords like the following, (Ex. 45 (a) is from Goossens' "Nature Poems," Ex. 45 (b) from Stravinsky's "Three Pieces for String Quartet") and the reader will have no difficulty in finding, in works of this type, chords of every degree of ambiguity and complexity used without the slightest attempt to incorporate the old-fashioned logic of preparation or sequence.



A passage in which conflicting tonalities are thus bluntly combined forms a striking feature of the "Neptune" movement in Holst's "The Planets." It is interesting musically, but it is perhaps still more interesting psychologically. The movement suggests an atmosphere strange, nebulous and remote, and the means employed is the alternation and combination of the two keys of E minor and G sharp minor. The following is a reduced version of the salient theme:



Musically the movement is masterly, as Holst almost invariably is, in that the effect produced is clearly and exactly that which the composer had in mind. Psychologically it is remarkable because of its intimate relation to a cognate effect, sought by Wagner in the theme of the "Tarnhelm":



Both composers desire an atmosphere of mystery. Both use the same two keys. Expand and combine Wagner's alternating tonalities, and the product is Holst. Holst had, of course, no conscious thought of Wagner in mind either when he chose these particular chords or when his imagination "telescoped" them. And this is clear proof, if proof were needed, that what appear to be most daring and original ideas are normally but the latest fruits of a particular heritage.

The end towards which these developments are converging is a field of speculation which to some degree concerns all who practise or explore the art of music. Multiple tonality must, in the last analysis, mean no tonality at all, in the accepted sense of that term. No tonality, in the present state of our musical apparatus, leads to pure chromaticism. And pure chromaticism can only be logically defined as a technique in which the chromatic scale alone has fundamental validity, all intervals within it and all chords derived from it being theoretically of equal consonance. Contemporary music has not blanched at this prospect, and we must face the discussion of it. This discussion will raise, in an acute form, questions which underlie all esthetic judgments. An art without conventions, without forms, or without limits, is to that extent an art without values. Can an art without values be properly considered to be an art at all?

GEORGE DYSON.

(To be continued.)

MY FIRST "MODERN"

A RETROSPECTIVE MEDITATION

PERHAPS, after all, it is a personal matter. Borodin was my first "modern," and on revient toujours à ses premières amours. But, biased or not by these early associations, I still feel that Borodin was, at least potentially, the greatest musical genius of his generation in Russia. Had he concentrated his thought upon one field instead of many, or even made it his first consideration, he might have enriched the world of music with works which would have dwarfed those of his contemporaries. But music never ranked first with him. To his friend, Mme. Karmalina, he writes: "As a composer I wish to remain anonymous, and am annoved at having to acknowledge my musical work. It is only natural. Music, for my friends, is the main thing, the principal occupation of their life, the end for which they live. For me it is a relaxation and a pastime which distract me from the absorbing duties that tie me to a professorial chair. . . . I love my profession and my science, I love the Academy of Medicine and my pupils. . . . If, on the one hand, I want to finish my musical work, on the other I am afraid to devote too constant attention to it, lest it should react unfavourably on my scientific studies." That being so, the wonder is, not that so many of his works were left in a fragmentary condition, necessitating the most careful reconstruction, but that he completed as many as he did. But scattered throughout his compositions are indications of original musical thought, as daring as that of Moussorgsky, though in a different, perhaps a more aristocratic way, as lyrical as that of Rimsky-Korsakov, and more satisfying than either of these at a corresponding stage of their development. Is there not some ground for believing that a man who could do so much in the intervals of teaching medicine, engaging in chemical research, and striving for the educational emancipation of Russian women, would have become a towering figure in music had his enthusiasms not been thus divided? It is easy to urge that had the divine fire burned brightly, chemistry could not have kept him from music. But the contest in the intellect between the claims of science and art is neither new nor rare. It rages in the minds of many who have only one pursuit. There are surgeons in whom the man of science has to control the artist, and musicians in whom the artist has

to strive for supremacy over the man of science. And, on his own confession, there was no conscious contest in Borodin, but, more probably, a high sense of duty, an idealism that gave the services he could render to suffering mankind precedence over the satisfaction of the need of self-expression which is the main incentive to art. A sensitive conscience might easily construe the one as a sacred mission, the other as a concession to personal vanity, and an idealist could not hesitate before the choice. However, this is mere speculation. Borodin, of his own volition, stands before us as an amateur, a dilettante, who made music in his spare time.

Here another side-issue obtrudes itself. Had he not been an amateur, would his originality have been equally untrammelled? In his day the official teaching of music, which was indispensable for a professional career, consisted mainly of inhibitions rather than recommendations. It was the great period of the Verboten in music. We have seen how academic studies sapped for many years the youthful vigour of Rimsky-Korsakov. Might they not have had the same effect upon the originality of Borodin's musical outlook? Remember Laroche's criticism of his song "The Sleeping Princess," which offends none to-day: "The greater part of the song is directed to be sung pianissimo. The composer, no doubt, uses only a small volume of tone because he is discreet and has pity on his audience; unless, indeed, it is that he is ashamed, like a man speaking in low tones of what he dare not mention aloud." This eminent contemporary critic dismisses Borodin's harmonic freedom as cacophony, and its author as an enemy to music, adding "it is just possible, after all, that this tendency towards the ugly may be contrary to his innate instinct and may only be the bitter fruit of inadequate musical education." Considering that Borodin is, above all, a melodist, and that his harmonic audacities are the commonplaces of to-day, there is some ground for asking whether, after all, the amateur that he was was not better situated to resist the dead weight of established authority, of which Laroche made himself here the mouthpiece. In fact the irresponsibility, in a technical sense, of the amateur may be, and has been more than once in musical history, a very valuable asset. It is even possible to attribute some of the merit of the present renaissance in English music to that vein of amateurishness in the English character which is not incompatible with great but unruly proficiency, as has been proved countless times in our literature. There is the basis of interesting speculation in this, but all the evidence available concerning Borodin's personality encourages the belief that professional responsibility would have intensified, or at least left unimpaired, the robust independence of his musical outlook.

In London during the late 'nineties there was an alert artistic curiosity concerning other matters, but in musical circles curiosity was at a very low ebb. Little new music was performed, still less was procurable at the shops. Few people became acquainted, except by the merest chance, with music so far from the beaten track as that of the Russian Five. Especially to one who was then compelled, like Borodin himself, to regard music as an occupation for scanty hours of leisure, was it necessary that chance should take a hand. That chance was the casual acquisition on impulse, without the remotest idea of the contents, of Alfred Habets's "Alexandre Borodine, d'après la biographie et la correspondance publiées par M. Vladimir Stassov " (1893), in Mrs. Newmarch's excellent English translation, with her informative preface. I was then in a curious state of mind towards music. Coming from a musical household, I had imbibed in early youth a wholesome respect for the German classical tradition and was not in the least disposed to heresy concerning it, but the conviction was growing upon me then, as it was upon the generation to which I belonged, that the German classics had told only a fraction of a wonderful story. There was, I felt, much more to be told and, like many others, I hungered for it. In search for that something which I vaguely felt to be "different," I had not only devoured every piece of music that fell into my hands, but I had also delved among the older music, which was then generally neglected, and even dabbled a little in exotic music. I had to defend myself from the charge that my interests were confined to the very old and the very new, but, though I could not have put it into words. I had a fairly accurate idea of what it was I was seeking. The Borodin volume seemed to hint at it. As the children say, I was "warm." Unfortunately, the attempt to obtain some of Borodin's music proved fruitless. There was none of it in any music-shop that I knew; it could be procured only on order, and I was not in a position to order music at random.

Then chance played a second card by making me acquainted with a young French musician whose father traded with England in coal, and had sent him to London. The coincidence was almost uncanny. Not only did our first conversation reveal him as a Borodin enthusiast, but there was probably not another music-lover in London who possessed what he invited me to see at his lodgings: a fat, unwieldly tome containing everything of Borodin's that had been published in the form of arrangements for piano, four hands, that is to say, the symphonies and quartets; the Steppes of Central Asia; the Scherzo; the overture, march and dances from Prince Igor; the finale of Mlada; and even the Paraphrases. We played through

the entire volume in a day, he with the enthusiasm of a missionary, I with that of the explorer. We desisted from this orgy, tired but not satiated. It is from that day of excitement that dates my initiation into the music termed "modern," and it would not be surprising if there still lingered in my mind a certain partiality towards the composer who first opened the gate to me. That day also determined indirectly my choice between the two potential careers that suggested themselves to me at the time. It naturally led me to inform myself of the history of the movement with which Borodin was associated. In the exaltation of the moment I mentally transferred the whole story to England and decided that, since I should never have the means to be, as I would have wished, the Belaïev of English music, I could at least strive to become its Stassov. Such heroics are excusable when one is young.

A quarter of a century has elapsed since then, and much has happened meanwhile that makes the alleged audacities of Borodin look very tame by comparison. To recapture the excitement is difficult. Even to appreciate it one must project one's mind back to a day when only a disciple of anarchy in music would have dared to usher in the allegro of his first symphony with such a figure as:



That symphony occupied the composer's leisure hours from 1862 to 1867. It was in the former year that Borodin had been introduced into the Balakireff cénacle, and he had acquired not only a new orientation, but also improved technical knowledge, imparted to him by the "defender of sharps and flats," who may, excellent man, have wondered at the duckling he had hatched. Harmonically speaking, the shocks that Moussorgsky administered to him were relatively mild, and he could always account for them to himself by reflecting upon their author's inadequate technique. But Borodin offered no such palliative. His only serious technical defect was a tendency to leave the seams showing in his work. The allegros of both symphonies suffer from this weakness. In other respects Borodin's craftsmanship was unassailable. Liszt once remarked to him: "Sie sind wohl sehr weit gegangen und das ist eben Ihr Verdienst. Sie haben aber nie verfehlt." But in the light of con-

temporary authority it was not all according to Cocker, and when he employed devices such as those which Laroche stigmatised as cacophony, one suspects that Balakireff's feelings may have resembled those which his other pupil, Rimsky-Korsakov, was to experience when confronted, a generation later, with the first audacities, technically unassailable, of his fledgling Stravinsky.

There is a type of pedal, or organ-point that, though not in the least Slavonic in its origin, has become incorporated in the Russian glossary to an extent that almost amounts to naturalisation. It is Borodin who furnishes the most characteristic of its early examples. They abound in the symphonies, and more particularly in *Prince Igor*. In comparison, that indicated at the end of the above example is quite ordinary, being merely an integral portion of the main theme,



which is much less distinctive than the treatment it subsequently receives. By one of those tricks of association which every critic should, but not all do, guard against, it has become indelibly linked in my mind with



The resemblance is, of course, quite fortuitous and superficial, but others no more convincing are frequently adduced when a new work is under discussion. Theme and pedal point are thus equally ingenuous. Who, in the 'sixties, was to foresee that out of them would grow



which must have made Laroche furious? Since then nous en avons vu bien d'autres, and history continues to repeat itself when Stravinsky writes passages like



These Russians are so very emphatic. If they must say such things, why not euphemise them in the classic manner, as Ravel does in



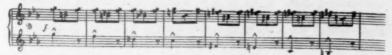
or, with the elegance of an eighteenth century "modern," Scarlatti, in



After this digression let us return to the Symphony. The scherzo is an early example of a type that was to become characteristic of the Russian symphonists. Borodin wrote another, not unlike it, in his first string quartet, and Tchaikovsky, who became acquainted with the "Invincible Band" in 1868, and composed his second (Little Russian) symphony in 1872, took it as the model of his scherzo. Liszt was fond of playing it with his pupils in the arrangement which Madame Rimsky-Korsakov (née Nadejda Pourgold) had made for

piano duet. Borodin describes him as "pecking at" the notes of a favourite passage, which is most probably

Ex. 8: Borodin, 14 Symptony



since he links it with another like it in the finale, where occurs



These are the first instances of a sequential pattern to which Borodin became much addicted. There is another in *Prince Igor*. Tchaikovsky, in the symphony to which reference is made above, remotely caught the flavour of it in



Long years afterwards an unconscious echo of it is heard in Elgar's overture In the South,



where it is extended to much greater length than Borodin would have tolerated.

In the trio of that same scherzo there lurks one of Borodin's most characteristic lyrical melodies, but it is that of the slow movement which starts another train of reminiscences. Soon after our musical orgy, whilst memories of this movement were vivid, my French acquaintance spoke to me of a compatriot who, though unknown beyond a narrow circle, even in France, was destined to take us a stage further along the road which we had found so pleasant to travel. Apart from a few songs, the most recent of his then published works was a string quartet, from which my friend played me the slow movement. He was right. There was no thematic or textural resemblance, but it was music that proceeded from the same impulse, only it had more refinement, as if rooted in an older, more classical culture than that of the Slav. It was all I heard that day, but the impression was so profound that I immediately placed an order for all that this interesting musician had published, or might publish, for the future. Needless to say, nothing was found to be in stock. The composer was Debussy.

As is well known, Debussy had visited Russia and returned much impressed with the work of the "Five," especially Borodin and Moussorgsky. Traces of this influence abound in his work, the classic instance being Nuages, the germ of which will be found in the accompaniment to one of Moussorgsky's songs. In a more subtle sense Debussy's mode of musical declamation profited much by these associations, and Russia thus repaid the debt she incurred to France when Berlioz visited Russia during the early struggles of the "Five," whose aims and ideas were much influenced by him.

This first symphony ends formally in the classic manner. Of the second it is scarcely necessary to write in detail, the work being by now familiar. When it was first performed E. F. Jacques was still writing the programme-notes for Queen's Hall. He was one of the few writers of that date who interested themselves in the music of India, and he could not resist intruding his hobby by affiliating the opening theme



to one of the Indian scales. No doubt Borodin, had he lived, would have been much gratified. Themes of this kind, suggesting in them-

selves the elements of a tonal conflict, always provoked discussion in those days. Musicians were even inclined to be indignant at the alleged tonal ambiguity of the theme upon which Dvořák composed his Symphonic Variations. We have grown less sensitive in these matters. Another reminiscence may, however, be admitted here. Young musicians sometimes have need of a call, or whistle, to attract each others' attention in the street or elsewhere. In these remote 'nineties, the call in London was the opening of Beethoven's fifth. In Paris, "les jeunes" of the period combined with their call a profession of faith by adopting this phrase from Borodin.

According to Stassov, the composer had in mind, when writing this movement, the assembling of the old Russian princes and bogatyri, with their heaviness, their uncouthness, but also their heroic grandeur, but it is seldom rendered in that spirit. Probably, with the object of mitigating the momentary dullness of some bad "joins" it is usually taken at a much quicker pace than the prescribed allegro moderato, whereby it is robbed of its stately dignity.

We have been told recently that if we compare this symphony with corresponding works by any of the great German symphonists, we will see the difference between a child's brain and a man's in all that concerns coherency and continuity of thought. The writer is the same who also declared that, in form, Ravel's quartet is childish beside one of Brahms'. But the whole tendency of the new current in music was away from sophistication, from all that, in the vernacular of to-day, would be described as "high-brow," and to criticise a work for the absence of what the composer, surely a free agent, chose deliberately to avoid, is to apply false standards. Weingartner, who certainly had no anti-German bias, gave his opinion in 1897 that this symphony was "ein Meisterstück aus einem Guss." If any comparison could be attempted at all, it would at best be with Dvorák. whose aims were not dissimilar, but who was impeded in his achievement of them by his associations with the influences against which Borodin reacted, possessing the advantages, to which reference has already been made, of the amateur over the professional musician. As for Ravel's quartet, surely the essence of form is shapeliness, in which quality it will bear comparison with most of the music written since Mozart, however elaborate its construction.

The third symphony, which promised to be a worthy successor, remained unfinished. There exist only the opening allegro, a transparently simple movement of great charm, and a scherzo of which the main section is in 5/8 time. The latter is also available for string quartet in the collection known as "Les Vendredis," a legacy of the musical gatherings held on Friday evenings at Belaïev's house, where

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most Russian chamber works of the period had their first performance. Another memento of those evenings is the quartet on the musical letters of Belaiev's name, to which Borodin contributed a Serenata alla Spagnola. Many compositions were similarly dedicated to the munificent patron who did so much for Russian music, and who, apart from these benefactions, was of a nature to inspire personal affection. In my desire to know more of the movement to which Borodin belonged I entered into a correspondence with him, which continued until his death, and I am indebted to him for innumerable kindnesses, including the presentation of the autograph manuscript of one of Glazounov's symphonies, which was sent to me when the printers had done with it.

Just as the second symphony is often performed, but never the first, the string quartet in D is far more familiar than that in A which preceded it. Yet the latter is, to say the least, sufficiently delectable to compensate for the inordinate length of its first movement, in which Borodin appears to have been actuated by a desire to fulfil rigid formal requirements. It is inspired—angeregt—by the A flat theme in the finale of Beethoven's string quartet, Op. 130.



and there is interest in comparing the manner in which it appealed to two such different musical organisms.



It is after playing through such a movement as this—the second subject is even more luscious—that one understands what was in Stravinsky's mind when, defending Tchaikovsky, he declared with exaggerated ruthlessness that Germans made themes and Russians

made melodies. It was an unwise assertion, but not without a strong foundation of truth. Even if we did not possess authentic sketchbooks to enlighten us, an impartial investigator would find it difficult to evade the conclusion that the themes on which most of the German symphonic edifices are erected have been fashioned with an arrièrepensée as to their potentialities in development. Detached from such connotations they often appear unattractively artificial, especially in their manner of approaching the prescribed cadences, which sometimes have a Procrustean effect, to be explained only in the sequel. It is the unnatural tyranny of development. The Russians of the 'sixties, and 'seventies, and 'eighties, the Frenchmen of the 'nineties, and most of those who have come after them, are concerned more with the plastic and graphic qualities of the ideas themselves. Æsthetically they have turned from the analogies of rhetoric and architecture to those of painting and sculpture. It is said sometimes that they have not yet achieved a substitute for what they have discarded. That is a matter of opinion. Neither side can convince the other. But supposing for a moment the reproach to be justified, one may still point out that it took generations to evolve sonata-form, whereas from the first Russian symphony to the "Rite of Spring" is no longer than the active years of an average lifetime.

For all its excess of formal zeal, this allegro is purely melodic. As for the second quartet, I well remember my youthful indignation on hearing it airily dismissed as being merely a bunch of tunes. It was not the "tunes" but the "merely" that implied misplaced condescension. There is a type of musician who, when he hears an obvious tune, decries the composition as tawdry, but when the tune is subtle enough to elude him, deprecates its absence. Borodin was an exceptionally fine melodist. One must forgive his few lapses into the more mellifluous lyrical taste of his day in favour of his far more numerous melodic ideas combining real beauty with originality of invention.

For the piano he wrote little, but even in the Petite Suite there are many distinctly personal touches the moment the popular "Au Couvent" (which would probably never have been written but for Liszt's "Ave Maria"—the one contributed to the Lebert and Stark Method) is left behind. In the accompaniments to "Chopsticks," known as "Paraphrases," it is Borodin's contributions which appear most natural, as compared with the others in which the ingenuity is so obtruded that it finally becomes a little irritating. The second edition contains a Mazurka which is apparently the parent of the two in the Suite, though few players of the latter can be aware that they are acompanying imaginary "chopsticks."

A great song-writer was lost to the world in Borodin. Only a dozen examples are extant, and of these the posthumous ones are mostly negligible, but the six composed between 1867 and 1870,* and the Arabian Song, are enough to prove what could have been expected of him but for his devotion to science, which, however fruitful, was a tragedy for music. But, as I wrote at the outset, it may be, after all, a personal matter. Memories of Borodin will always haunt me. One day it is the two intertwined melodies, Russian and Oriental, of the Steppes, another day some fragment of Prince Igor—not the cavatina which was Borodin's tribute to the Italianism of contemporary tenors—and sometimes even the humorous male quartet Sérénade de Quatre Galants à une Dame, a trifle of no consequence whatever, but possessing what so much music lacks: a definite and recognisable physiognomy.

EDWIN EVANS.

"La Princesse Endormie," "Chanson de la Forêt Sombre," "Dissonance," "La Reine des Mers," "Mon Chant est amer et sauvage," "La Mer."

THE TRULY MODERN IN MUSIC

Il n'y a de nouveau que ce qui a vieilli, says a French adage with the shrewd half-truth of paradox. Like all epigrams of a recklessly generalising nature, this is applicable, with cautious reservations, to any manifestation of human activity, and therefore to art in general and to music in particular. For indeed, who is to say that anything in music, however unexpected, is new, merely because it did not exist in precisely that form a decade ago? Who will assert that it is not going to be moribund a year hence?

The disagreement of critics as to how far the seeker after novelty should be allowed to go, no less than the lamentable lack of "ear" for what is essentially modern on the part of music-lovers at large, proceeds solely from their inability to realise that modernity is by no means restricted to the music of to-day. There is no such thing as modernism in music as viewed from one particular point in its history. To some members of the present-day public, modern music begins roughly with the opening of the twentieth century, to some with Brahms (save the mark!), and to some with the music written, as Granville Bantock once put it, the day after to-morrow. Ernest Pontifex, in "The Way of all Flesh," who cannot bring himself to like modern music, considers that it begins with Bach. That inveterate Handel-worshipper, Samuel Butler, here brings us near the truth by his very perversity, not, indeed, in making the futile attempt at drawing a boundary-line for modernity, but by inciting us to speculate on what constitutes the truly modern in music.

It is not a question of drawing comparisons between contemporaries. For not only is Bach vastly more modern than Handel, Purcell than Blow, Schumann than Mendelssohn, or Elgar than Stanford, but Scarlatti is more advanced than Brahms, Chopin than Scriabin, and Gesualdo of Venosa than Ravel. The period at which a strikingly novel passage was written only enters into the discussion in so far as the innovation is the more "modern" the earlier it occurs in history. Handel's use of 5-4 time in Orlando and Bach's definite hint of a whole-tone progression at the words "God took the debt from me," in No. 25 of the Matthew Passion are actually, and not merely relatively, newer and more daring than anything that Chopin, * the

[&]quot;The slow 5-4 movement in the first Sonata.

Russians, Liszt* or Debussy have done in these directions. The comparison between Bach and Handel is particularly instructive, because, if for a moment it places the two masters side by side as audacious explorers, it supports at the same time the view that the former is immeasurably the more modern of the two. Handel, it is interesting to note, although he not only uses 5-4 time, but also a simultaneous whole-tone sequence—surely a remarkable enough combination—does so in a passage where he sets out to depict the raving of Roland: nothing short of lunacy could provide him with a sufficiently strong pretext to strain at the leash of convention which Bach breaks time and again without needing the excuse of a dramatic situation.

This brings us to the observation that it was dramatic music which throughout history proved most productive of novelty, since it gave composers opportunities which they would not otherwise have dared to create for themselves. Monteverde, Gluck, Weber and Wagner would not have been great reformers, had they not been primarily devoted to the stage. We should have had nothing like Monteverde's amazing Prelude to Orfeo, which anticipates that to the Rhinegold in being based entirely on one single chord, and would be as little justified in absolute music as the latter; we should have had nothing from Gluck like his Tartarean music, nothing from Weber like the Wolves' Glen, and nothing from the youthful Wagner like the Venusberg.

The premature appearances of modernisms generally supposed to belong to a later period are almost always to be found in passages where the composer endeavoured to suggest something gruesome or fantastic. But novelties such as these, produced by literary suggestion, are not the true modernities of musical history. That Berlioz and Liszt are two of the greatest innovators of the nineteenth century, is not due to the "Symphonie Fantastique" and the "Faust Symphony"; such works are the natural product of a romantic era. It was by certain qualities not exclusively inherent in their period that they projected themselves far into the future: Berlioz by his rhythmic freedom and his then unheard-of feeling for colour as a value quite detached from other musical elements; Liszt by his drastic and wholesome interference with form and his amazing style of writing for the keyboard. But a composer's contemporaries see only the most obvious novelties, which they either acclaim or reject with equal lack of discrimination. Who can conceive so mild a piece as the Midsummer Night's Dream Overture to have been so fantastically new to the Parisians of 1892 that the orchestra jibbed at it in the most recalcitrant manner

^{*} The whole-tone passages in the melodrama on Lenau's "Der traurige Mönch."

at rehearsal, the oboist and drummer even absenting themselves in protest? Who is prepared to believe that the mad scenes, vampires and infernal dances of wicked nuns' ghosts of their Donizettis, Marschners and Meyerbeers could have been accepted by the audiences of the early nineteenth century as adequately depicted in music? Yet who knows but what the critic is not taken in by exactly similar sensations to-day? He cannot deny, at any rate, that he was imposed upon yesterday and the day before. Has he not had to confess that much of what he thought real tragedy in Tchaikovsky has turned out to be merely Mrs. Gamp enjoying herself in her own way at a funeral; that what he took for an idealist philosophy in Scriabin has revealed itself as the aphrodisiac welter of Circe's Island? It is not safe, in very truth, for the champion of modernism to be for ever proclaiming to the world the amazing newness of the composer of the day after to-morrow. For all he knows, his intrepid revolutionary may soon be as vapid as Kalkbrenner, Steibelt, Herz, or any of the idols washed down to obliteration by the ebb of time. What Johnson said of Gray will one day apply to many successful musicians of our time: "He was dull in a new way, and that made people think him great."

How much music has not pranked itself out in its time as a novelty? What discord has not grinned and grimaced out of the context of a score successfully enough to make us mistake it for an actual new countenance, when its features may be discovered, almost to a certainty, somewhere in Palestrina, in Wilbye, in Bach—anywhere—though seen obliquely and flitting swiftly through a contrapuntal texture instead of staring us full in the face as a solid vertical block? What rhythm is there so new that it may not be found in some old madrigal, Flemish, Italian or English? What melody, based on whatever odd scale and leaping over whatever intervals, but has not its antecedent in a folk-song of some part of the globe?

Not only do most things that strike us as modern grow old quickly: they actually were old when they were written. How the German academics howled at Reger, who was in reality duller, more formal, and more academic, if possible, than they were themselves! How the world shrieked over the unholy ugliness of Strauss, which is now the most attractive feature in the music of a composer who nauseates us by his occasional sentimental passages of diatonic beauty! How French critics extolled the revolutionary daring of Ravel, whose most delightful quality is his deep-rooted love of tradition! How the admirers of all things Russian chuckled with delight over Rebikov's writing a whole piece in consecutive fourths and fifths, as if that were any less childish than writing entirely in thirds and sixths!

There are composers, of course, who are not so quickly caught up, but it is only a question of time, and none can tell that the Schönbergs and Milhauds of to-day may not be the Nepumuk Hummels and Cipriani Potters of a hundred years hence; that the Stravinskys and Bartóks we now either anathematise or admire for their heresies against current creeds, will not one day be looked upon with an indulgent smile as composers whose mildness can only be tolerated by the retrospectively gifted.

Yet, just as there are things which have always been old, so there are things which custom can never stale, which are no more out of date now than they were on the day of their creation. These alone are the true novelties, or better, they alone can be seen with certainty to be the real modernities in music. "Nothing can be safely pronounced new but that which has aged without growing old-fashioned." Thus should read our French proverb—a thing of wisdom as well as wit.

The genuinely modern is never deliberately contrived: it is discovered by accident, much as King John's cook found out that eggs improved puddings only when she dropped them unawares into her mixture. She left them there, hoping that they would do no harm, and behold, the result was gustable. Thus it was, one feels, that Scarlatti let his consecutive fifths slip into his music here and there, in his dashing manner of writing. They made delightful music and so he let them stand, but he did not deliberately set out to use them; that is why they sound so spontaneous and are as modern as ever to-day. All true novelty is instinctive, not due to conscious volition. Strauss is grown stale already because his modernity was calculated. Strauss and countless others! All innovations which the composer himself or his knight-errants-more errant than knightly sometimescan formulate into a phrase, will next be galvanised into a system, classified, and shelved. Scriabin's new harmonic fundamentals were at first thrilling as such; but it soon became evident that they are applied as systematically as ever tonic and dominant were, and his method-as all methods must-now strikes us as pedantry, the worse for being sophisticated pedantry posing as mutiny. And thus a pretended musical sansculottism is seen on every hand to wear a very palpable pair of conventional breeches, as great an impediment almost as the scholastic shackles from which it boasts itself free.

The truly modern, then, cannot be produced by the mere will to produce it. Its audacities must result from the joy of creation, from unrestrained spontaneity, from a slip of the pen, as it were, committed in a moment of passionate enthusiasm. Alfred de Vigny's Othello was condemned by the Académie because in it occurred

the word mouchoir, not sanctioned by the etiquette of tragedy. Nevertheless it remains the first French romantic play of importance, and it did introduce the word, a useful word, into serious drama. In music, people have said mouchoir before and since; indeed many composers have lately taken a delight in mentioning other articles of the wardrobe, for the sheer pleasure of shocking those of Victorian upbringing. But a term used to such a purpose at once becomes a solecism—only when it is employed naturally can it be converted into an asset. Scarlatti uses some very naughty expressions in his bouncing, swaggering, high-spirited music, but they are delightful and perpetually fresh because they really do convey his irrepressible sprightliness.

Thus it is with all spontaneous effects, however simple. Such things as the first bar of the sextet in Don Giovanni, by that simple substitution of E natural in an opening passage in E flat, never fail to give us a thrill of delighted surprise. Countless are the true modernisms in old music-and in new, if we but look for them in the right places. Can there be rhythms of more marvellous complexity than in the Elizabethans; more crazy harmonies than in Bach's Chorale Prelude "Allein Gott in der Höh' sei Ehr "; a more glorious freedom from the fetters or form than in Purcell; more extraordinary progressions than in Mozart's little Minuet in G for piano; weirder exoticisms than in the slow movement of the A major piano Sonata by that most bourgeois of composers, Schubert; more curious rhythms than in Schumann's "Grillen" and the analogous passage in "Abendmusik "; more startling harmonic surprises than we find strewn all over Chopin's work? There is a modulation here and there in Moussorgsky, a declamatory passage in Hugo Wolf, a patch of colour in Rimsky-Korsakov, a haunting harmony in Delius, a vibrating, liquid sound in Debussy, a captivating rhythm in Chabrier, a naturenote in Sibelius, a curve in Bartók or Stravinsky, which not only surprises us at first, but strikes home as something new and unexpected at every repetition. Such things alone are the true modernities of music, and they are not restricted to what happens to be temporarily called "modern." Nothing that fails to stand the test of lasting surprise is truly novel, even if it shocks us out of our wits at a first hearing. If the astonishment does not endure, we may be sure that we have been tricked into stupefaction by an effete device decked out in a new garb. And, unless we watch carefully, we shall be taken in again and again, for, as Carlyle says, " to the blind all things are sudden."

ERIC BLOM.

WAGNER'S ATTITUDE TO ART

Eighty-one years ago, in the spring of 1842, the young Richard Wagner left Paris for Germany, his head filled with projects, as yet but dimly conceived, for the reform of the opera. He had already sent in advance the score of Der Fliegende Holländer, the first—for Rienzi scarcely counts—of the works which were destined to make his name immortal.

As to the nature of these reforms, I am not sure that they are generally understood. If ten people were asked to characterise Richard Wagner, nine would, I believe, reply that he was a great musician, who after a long and determined struggle at last achieved an unparalleled success. He was, indeed, perhaps the greatest of all musicians, but in him the dramatist took precedence of the musician, and the philosopher was before the dramatist. Perhaps this last statement will be demurred to by those who understand philosophy only in its academic sense. They can point to Wagner's repeated insistence that when engaged in creating all speculative theory was banished from his mind; but the point will appear trivial when we remember that philosophy means love of truth, and to the first users of the word-Pythagoras and Plato-never meant anything else. Wagner in his last years gave expression to the consistent attitude of his life towards art when he said: "I would gladly give to the winds everything that I have composed, could I thereby hope to further the cause of freedom and righteousness."*

In the opera the drama had been sacrificed for the sake of the music.† But what was so clear to Wagner was less so to the public and to Intendants, who saw in the operas of Rossini and Meyerbeer only a highly admirable form of art, and could not conceive why an art which nightly filled the theatres to overflowing should be in any need of reform. The problem before Wagner was not to fill the theatres, but to make the opera a true expression of human life, as his beloved Shakespeare had made the drama two centuries before. It was far from new; it had occupied the thoughts of a whole series of composers from the Florentines of the late Renaissance down to Gluck, Mozart and Weber, all of whom had attempted its solution, each in his own way. The form was for the present given; it was that of the Italian opera, but it suffered from an inherent defect due

^{*} Glasenapp VI., 309. †Ges. Schr. III. p. 231

to its origin amid the fashionable circles of society, which craved, not for serious art, but for diversion. The labours and struggles of life were not its concern; it wanted only the sweets—sweet singers, sweet melodies, piquant situations, easily comprehended with the least possible expenditure of effort; more than this it did not demand of the musical drama. Such was the public which Wagner found in Dresden, and such it remains the world over to the present day.

But human life is not a succession of sweets and pleasures; these are its prizes, and have to be won by arduous and often uninteresting labour. Life is a continued organic growth, and the drama must show it in its continuity, when the moments of lyrical exaltation will appear only at rare intervals, as the necessary outcome of many preceding currents. The immediate problem before Wagner was therefore—as he then conceived it—a technical one: how to weld together the detached lyrical elements which, it was thought, were of the essence of music, to form the continuous stream of human life. Speaking broadly. Italian composers had tried to establish dramatic continuity by means of explanatory recitatives, whereby the unrivalled flexibility of their language was of inestimable advantage. Still there was a lack of organic coherence; the recitatives were held to be of subordinate importance, and had to be hurried over as quickly as possible. In Germany, with its consonantal language, the connecting explanatory passages were not sung, but spoken in ordinary prose, and in the Singspiel the sudden descent from the poetical language of song was felt to be intolerable.

But as time went on the problem widened. Wagner soon realised that it was not really a question of a new technical formula, of some device of composition; that if art is an organism it must grow naturally from a healthy root amidst suitable environment, and henceforward his efforts were directed to forming the soil in which his idea could flourish. That soil was human nature itself, and his first purpose was so to educate his public that it should free itself from the lies of social convention and become receptive to what is pure and natural in art. Technical formulas need not be considered; they would find themselves if the growth is healthy. To Liszt he wrote in 1850: "I require nothing from my hearers but healthy senses and a human heart "; and to Theodor Uhlig-perhaps the only friend of his life whom he loved disinterestedly-he wrote two years later: "I cannot help thinking that if we had life art would be superfluous"; and again, passionately: "Oh men! Feel rightly! Act as you feel! Be free! then we will have art." Such expressions form the groundbase of all his subsequent writings.

* Letter to Lisst, Oct. 2, 1850.

[†] Letters to Uhlig, Jan. 12 and March, 1852.

If the opera had been stunted and disfigured by fashionable conventions, instrumental music on the other hand, unencumbered by words, had developed naturally in accordance with its own laws, and had evolved an organic structure unexampled in technical intricacy, and so perfectly adapted to its end that it had been enabled to soar into regions "unknown to the art of any nation of any epoch." Here, perhaps, could light be found. If Shakespeare's drama presented the infinite variety of human life in time and space as action and speech, no less did Beethoven's dramas present its musical aspect. Could not the two be united? Would it not be possible so to adapt the rhythmi-techtonic forms of the symphony to the modern drama that the three elements of human activity—action, thought and music—should be united in the universal art-work?

In Dresden the Royal Library was open to him, and the years 1842 to 1849 were years of literary study and reflection. He found that the problem which was occupying his mind had already been solved, at least once in the history of the world, namely, in ancient Athens, and from his study of the Greek drama he learned that the three elements of expression had been united from the beginning, that their divorce in the modern drama was a retrograde process, due to the more complex conditions and consequent specialisation of modern life. At the same time, through occupying himself with early history, he learned that the springs of art—as well as of ethics—lie in mythology, to which historical events are merely the framework. Historical figures are the creatures of circumstances, while mythological beings act out of their own inner impulse; in other words, in mythology the human element is predominant, in history it is submerged in and controlled by external conditions. The deeper we read in history the more we become convinced that the actor could not do otherwise than he did; that he is impelled by an inexorable necessity to act-often in opposition to his own better will.

For long he pondered in uncertainty between history and mythology as subjects for dramatic treatment. Not without repeated trial and failure did he at last realise that there are two human arts, two modes of representing human action. They may be shown either:

(1) as the necessary resultant of an endless array of external forces acting upon the individual; or (2) as proceeding directly out of the sovereign will of the individual himself. The former is best adapted to romance, which, untrammelled by limits of space, affords ample

Die Sarasenin (1843) and Friedrich Rothbart (1848) are examples of his experiments in historical drama which came to nothing. The whole subject of myth versus history is treated fully in Eine Mittheilung an meine Freunde Ges. Schr. IV., 313-314, 321.

room for expatiation, while the latter finds its natural expression in the musical drama, the distinctively human art, where the actors no longer describe, depict, or narrate, but directly enact the events concerned, and therefore appeal to us with a force possessed by no other art. These were the considerations which brought him to his well-known formula for the subject-matter of the drama: "The purely human, freed from all conventionality." It is evident that the man who is strong enough to command the circumstances and act from his own impulse is in the strict sense a hero, or a god, while the entry of music enabled him to simplify not only the subject, but also the language, by relieving it of the finer shades of meaning, which music with its unrivalled fluidity was better able to express.

At this propitious moment he fell in with

".... the best tale pity ever wrought
Of how from dark to dark bright Sigurd broke,
Of Brynhild's glorious soul with love distraught,
Of utter love defeated utterly,
Of grief too strong to give Love time to die."

The importance of his making acquaintance with the Icelandic Völsunga Saga just at this time of doubt and hesitation can scarcely be over-rated. Here from the earliest roots of the Germanic people did he draw his mythical material. It is significant of his way of working from within that he seems only to have read the story once hurriedly, and never to have looked at it again before his own work was sketched in its main outlines. The narrative incidents mattered little to him; he had grasped the soul of the myth, and in his exalted enthusiasm, often with culpable recklessness, he left the incidents to find their places as best they might. As a drama the Ring is a failure; nevertheless it is his greatest work.

When half-way through the composition he began to realise that for a drama on this scale, representing high ethical ideas of the fall of the ancient gods and the birth of a new world the public was scarcely as yet prepared. Never, even in the darkest days of exile, had he lost sight of his original task of preparing the soil for his drama. In Zurich, as before in Dresden, his first thought had been the founding of a school to train performers for a perfect representation, and throughout his life his main object, pari passu with the representation of his works, was to train especially singers—for of

^{*} Eine Mittheilung, &c., Ges Schr. IV., 318. † The same might be said of Goothe's Faust.

first-rate instrumentalists there was abundant supply—capable of representing them. Pessimist though he was, eternally at war with existing institutions, nothing is more noticeable in his character than his inextinguishable faith in the perfectibility of mankind. His is the philosophy of the Vedânta and of Christianity, as opposed to that of Buddhism and of Schopenhauer: The world is corrupt—but the means of redemption are at hand and will be found in the end.

In despair of ever reaching the heart of the public through his mythical drama of the decay of the gods he determined to compose something easier, and chose a subject which, as he fondly supposed, would appeal to everybody—Love.

In Tristan und Isolde, even more than in the Ring, Wagner has departed from the tradition of his predecessors, but with far better judgment and of deliberate purpose. No drama has ever been more grievously misunderstood. His story has nothing in common with that of his immediate "source," Gottfried von Strasburg. The interest of the mediæval poem lies entirely in a succession of ingenious tricks played by a pair of shameless lovers on a kindly but feeble old man. There is nothing of the sort in Wagner; his tragedy has nothing whatever to do with adultery. There is guilt, it is true, guilt deep and appalling, but it is not the guilt of sexual licence; it is far graver. The hero in his utter selflessness has for the sake of his country determined to renounce his own claim as next of kin, and by persuading his uncle to marry to secure a lawful succession in the direct line; but to accomplish this political end he has sullied himself with a dastardly crime, in sacrificing the woman who loves him and is bound to him by every tie of honour, human or Divine. The theme of the tragedy is the expiation of his crime by death; only he cannot nerve himself to pay the just penalty of his life until he knows that she is ready to depart with him. The moment at the end of the second Act where she declares herself is the sublimest of all tragedy.

Such is the course of the narrative; but the psychic roots of the tragedy are in the music. Tristan und Isolde is a titanic symphony, to which the text is a commentary, often so obscure as to be barely intelligible. I do not believe that any artist ever before worked at such emotional tension as did Wagner when composing it,* or that any other human being could have supported the mental strain and have accomplished the composition without faltering; for there is no sign of faltering in Tristan; the psychical development is throughout

^{*}See the repeated allusions in his letters at the time, for example in the Tagebuch to Matilde Wesendonk of December 8th, 1858, and the letter of March 2nd, 1859.

strictly logical, and such faults as there are are swept away in the flood of endless melody. It was *Tristan* that called forth Nietzsche's fine essay on the "Birth of Tragedy out of the Spirit of Music," the only work of enduring value that has yet been written on Wagner's art.

Of Die Meistersinger little need be said. There is no new development of ideas, and being a simple story of mediæval domestic life it appeals directly to all. It and Tristan are the two most perfect embodiments of his artistic ideals, and it is worth noting that neither of these two works is mythical in conception or in treatment.

Wagner's experiences with existing theatres had hitherto not been of a kind to afford him much encouragement. His writings and the representations of his works had made a great stir, but on the whole the attitude of the public was rather one of curiosity than of intelligent sympathy. In Paris, Tannhäuser had been whistled off the stage; in Vienna the delays and intrigues of singers and officials had brought him to the brink of bankruptcy, from which he had only been saved by the timely intervention of the King of Bavaria, while in Munich the king's support of him had almost brought about a revolution, and he had been dismissed. To obtain suitable representations of his works under such conditions was a hopeless task, and thus he was in a manner compelled to build his own theatre. It is necessary to bear this in mind, because the Bayreuth scheme has often been represented as a huge advertisement, or as due to his overweening megalomania. Experience had shown very clearly that no choice was left him between building a special theatre, for special festivals, or renouncing his projects altogether. He had always declared that such works as his, with the enormous demands which they made on the resources of the stage and the perfect organisation which they needed, and goodwill on the part of everyone engaged, as well as the concentration which he demanded from his audience, could only be performed at special festivals; but once he was in possession of his own building, and of a competent staff of which he was the undisputed master, he might hope for success. Such enterprises, however, cost money, and whence was he to find the funds? Von Bülow once said of him that he was as great a financier as he was a dramatist, and the assertion seems almost justified by his subsequent achievement.

This is not the place to recount the marvellous history of the building of Bayreuth theatre and the organisation of the festivals. His schemes for obtaining money failed, but never his indomitable will. There came a time when the edifice was all but complete, and he was faced with the immediate prospect of boarding it up, to be

first-rate instrumentalists there was abundant supply—capable of representing them. Pessimist though he was, eternally at war with existing institutions, nothing is more noticeable in his character than his inextinguishable faith in the perfectibility of mankind. His is the philosophy of the Vedânta and of Christianity, as opposed to that of Buddhism and of Schopenhauer: The world is corrupt—but the means of redemption are at hand and will be found in the end.

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^{*}See the repeated allusions in his letters at the time, for example in the Tagebuch to Matilde Wesendonk of December 8th, 1858, and the letter of March 2nd, 1859.

strictly logical, and such faults as there are are swept away in the flood of endless melody. It was *Tristan* that called forth Nietzsche's fine essay on the "Birth of Tragedy out of the Spirit of Music," the only work of enduring value that has yet been written on Wagner's art.

Of Die Meistersinger little need be said. There is no new development of ideas, and being a simple story of mediæval domestic life it appeals directly to all. It and Tristan are the two most perfect embodiments of his artistic ideals, and it is worth noting that neither of these two works is mythical in conception or in treatment.

Wagner's experiences with existing theatres had hitherto not been of a kind to afford him much encouragement. His writings and the representations of his works had made a great stir, but on the whole the attitude of the public was rather one of curiosity than of intelligent sympathy. In Paris, Tannhäuser had been whistled off the stage; in Vienna the delays and intrigues of singers and officials had brought him to the brink of bankruptev, from which he had only been saved by the timely intervention of the King of Bavaria, while in Munich the king's support of him had almost brought about a revolution, and he had been dismissed. To obtain suitable representations of his works under such conditions was a hopeless task, and thus he was in a manner compelled to build his own theatre. It is necessary to bear this in mind, because the Bayreuth scheme has often been represented as a huge advertisement, or as due to his overweening megalomania. Experience had shown very clearly that no choice was left him between building a special theatre, for special festivals, or renouncing his projects altogether. He had always declared that such works as his, with the enormous demands which they made on the resources of the stage and the perfect organisation which they needed, and goodwill on the part of everyone engaged, as well as the concentration which he demanded from his audience, could only be performed at special festivals; but once he was in possession of his own building, and of a competent staff of which he was the undisputed master, he might hope for success. Such enterprises, however, cost money, and whence was he to find the funds? Von Bülow once said of him that he was as great a financier as he was a dramatist, and the assertion seems almost justified by his subsequent achievement.

This is not the place to recount the marvellous history of the building of Bayreuth theatre and the organisation of the festivals. His schemes for obtaining money failed, but never his indomitable will. There came a time when the edifice was all but complete, and he was faced with the immediate prospect of boarding it up, to be

left as an enduring monument to his "folly." His debts, which before they were paid by King Ludwig had amounted to tens of thousands, were now reckoned in hundreds of thousands. All through this terrible time he was quietly engaged on completing the score of the Ring and organising his training school. At last the house was finished and the first festival was held; but, instead of providing a large surplus towards paying off the debt it ended in a huge deficit. For the present the theatre had to be closed, but he immediately set to work on Parsifal, the last creation of his genius, and six years later produced it at a second festival. This time the financial results were more encouraging, but the debt was still far from being paid, and a few months later he died.

To all outward appearances Wagner had in these last years of his life achieved unqualified success. He was in possession of his theatre; he disposed over a devoted band of highly competent executants and artists after his own heart, eager to obey his slightest command, and literally to give their lives for his art. Even the crushing debt was in a fair way to being extinguished, as it actually was in the course of a few years, leaving his family in affluence. What more could any man desire?

Let us for a moment examine how far this view is justified. Popular success had never been his aim. Vanity-the desire of fame for its own sake-was no part of his nature. At the very first great success of his life, when, while still under thirty, he was invited to become Kapellmeister at the Dresden Court Opera-house, he had declined to accept the post except on very stringent-though amply justifiable-conditions.* Throughout his life he had scorned mere external success; he had endured exile, poverty, persecution, that he might preserve his art intact. Again and again, when in utter destitution he had refused the most brilliant offers-from Germany, from Russia, from America-merely because he thought that his acceptance of them, while filling his pockets, would degrade his art into the position of a fashionable entertainment like the Italian opera. The attainment of his ideal, the bettering of human life by raising the souls of men, first to the understanding, then to the enjoyment of the noblest art, was not to be achieved by the aid of polite society. The aristocracy to which he appealed was not that of wealth, but that of intellect; of minds free from the corruption of sophistry, of humble musicians, artists, students and their fellows, of men and women with "warm hearts and open senses." His undertakings were to be free from all financial considerations; his audiences were

"See the letter to von Lüttichau of January 5th, 1843, published in Prolas Beiträge zur Geschichte des Dresdner Hoftheaters. not to pay for their seats, but were to be invited as guests, the expenses being met from voluntary contributions. A Utopian dream indeed, but who shall say that had he lived but a few years longer it might not have been realised?

But it failed. His artistic purpose was the drama, and how many of that brilliant audience from Paris, London and Boston who assembled to witness the production of Parsifal realised the drama in its full significance? The writer of this article was present on that unique occasion, and can speak for what he saw. The notion of going to the theatre in the afternoon for a strenuous intellectual effort, such as Wagner had contemplated, was the last thing in the minds of these pleasure-seekers. Enthusiasm there was, in abundance, but for what? For the glorious music, for the wondrous Gregorian melodies, for the entrancing dance of the flower-maidens, for all the lyric ornaments of the drama there was appreciation enough. Nor can it be denied that there was an atmosphere of devotion and reverence pervading the assembly. But for the drama itself, that lovely mystery of early Christian faith, there was little understanding except among the thoughtful few.

That Wagner knew his ideals had failed is clear. On one condition he had always insisted whenever his works were to be performed away from Bayreuth: namely, that they should be superintended either by himself or at least by someone deputed by himself whom he could trust to see that they should not be desecrated. Towards the end of 1880, while preparations were in progress for the production of Parsifal, there came to him a Jewish entrepreneur named Angelo Neumann, with a scheme for a travelling theatrical company to give representations of the Ring. Wagner's financial affairs were then at their very worst. He was an old man in failing health. In the event of his death it was certain that the theatre with the whole of his property would be seized and sold by his creditors, and that his wife-the woman who had sacrificed everything for him, who had once saved him from utter shipwreck-would be left with her five children to starve. The scene at Wahnfried is told by Angelo Neumann himself. At that time all his business affairs were in his wife's hands. He looked to her and asked: "Can we trust him?" She agreed, and he at once signed the contract. He knew well what he was doing, and what the result would be. In the course of the next few years his works were performed in every capital in Europe—on purely economic lines. The first singers of Germany were engaged, but the works themselves were cut, mutilated, disfigured, until they were barely intelligible. But from that time his name was famous; all opposition was quelled;

the Times—always his bitterest opponent—engaged a Wagnerian editor, and he was saved from all anxiety for the future.

Such was the end of the man who wished, not to be lauded and worshipped, but to be understood.

I have in this paper somewhat departed from the accepted canons of art criticism. I have done so on purpose. It is useless to apply to Wagner tests gathered from the work of other artists. Every great reformer is a law to himseli, and Wagner's aims are very different from those of most other artists. He demands a "revaluation of all values." He was a strong conservative; that is to say, he harks back to eternal principles which have become corrupted by tradition He is an extremist inasmuch as he will have nothing to do with patching up a rotten edifice. "Zersponnen muss ich in Spähne ihn sehen," says Siegfried of his sword. His art cannot be tried by the Greek precept of "nothing too much." As well might we think of measuring Mount Everest with a footrule. Nevertheless he is far from standing alone. His position is exactly that of Ruskin when he informed a Royal Commission that their reforms of museums and galleries would be useless unless they were accompanied by reforms in social and economic conditions. He had many faults; but they were not the faults of irresponsible licence; his extremism was always rational. For those who with full knowledge deliberately reject his art, who hold that his mighty influence has been for evil, I have every respect. Without sharing their views I must admit that there is much to be said on their side. But of those who try to belittle him, who speak of him as a mere farceur, and of his art as a passing fashion, I can only say that they are judging him by the measure of their own limited minds.

Of the more recent literature on Wagner there is little to be said. Of articles and pamphlets on subjects more or less remotely connected with the Meister there is still no dearth in Germany. The Bayreuther Blätter have been continued without interruption. Much of this minor literature is thoughtful, and some of it well written, but the only work of real importance which I have met with is the three-volume biography of Max Koch, of which the last volume appeared in 1918. It is a work of great industry, and not without merit, but is unhappily marred by the diffuse style so common among German writers. Reduced to half its size it might still be useful to students in search of new information about the externalities of Wagner's life. But do we want more of such information than we already possess? It seems to the present writer that we have too much writing about Wagner, and too little real comprehension of his art. As a general rule a work of art will speak for

itself to those who can understand its language; comment often obscures rather than elucidates its meaning, and especially with Wagner literature we are in danger of not seeing the flowers for the weeds.

Of another class of literature I would speak as briefly as possible, but I cannot pass it over altogether in silence. The custom has in recent years been revived of besmirching Wagner's private character by dishing up ancient tittle-tattle gathered from the slum Press of Germany. Unfortunately, writings of this description attract attention and the public mind becomes poisoned. It is necessary to warn English readers that the greatest caution should be observed before accepting anecdotal accounts which rest upon no sort of evidence. In no sense was Wagner a libertine. His views on life and on art-so intimately bound up together in his mind-are embodied in Die Meistersinger, which is a drama on the principles of art. Hans Sachs, the true poet, reproves the hot-headed young knight for the wildness of his lay. "With such songs," he says, "you may seduce a girl to an adventure; but for holy marriage very different strains must be found." It is the change from Bacchus to Orpheus, from the Menads to the Muses.

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G. AINSLIB HIGHT.

IN TUNE OR OUT OF IT

PLAYING or singing in tune is a function of the ear and of the musculature together. Of these two everyone now recognises that the ear is the more finely differentiated. This may be inferred from the fact that the ear must be the standard and control for the work of the muscles. The muscles have to do what the ear prescribes, and their work is constantly subject to its criticism.

Of course, as far as music is concerned, the action of the musculature might well have been more delicately graded than the sensations of the ear. But the ear is a highly refined sense. Or, since it was given the duty of regulating action, we may say it has been progressively refined until it now greatly exceeds action in its delicacy. This is an example of the reserve power or efficiency that the body shows in so many other organs, such as the heart, lungs, bones, &c. The heart has speed, the lungs have expansion, the bones have resistance to crushing power, greatly in excess of even the exceptional needs of the healthy organism.

So the ear is always adequate to any demands that may be put upon the musculature. In fact, the ear is likely to make demands that the muscles cannot satisfy. Therefore, when difficulties arise we need not expect to find their cause in the muscles, but in the ear. That may seem at first to be an illogical inference. But it is not so. For we have no reason to suppose that over the main range of their normal action the muscles meet any difficulties at all. At the extremes of maximal and minimal tension difficulties are bound to occur. But between these limits action should be smooth and easy. In the ear similar difficulties appear at the extremes. These have little real musical interest. But the intervening range is by no means In every octave there are points or intervals between points that present special difficulties to the performer, especially to the singer, who has absolutely nothing to guide his voice but his ear. It is commonly said that many of the supposed rules of music merely embody the restrictions of the voice's action. But as a muscle the voice has no special inherent defects except at the extremes of its action, unless it be at the changes of "register," which are not in question in this respect. Therefore, these alleged vocal difficulties must be difficulties of the ear, not of the voice. And they are, therefore, not removed by change from voice to instrument. For the instrument is also under the guidance and control of the ear. So these so-called rules have their source in the ear and are, therefore, probably "rules" of music itself.

The ear, then, is the standard. Now, what can the ear do in discriminating tuning? This is a question of the ear's delicacy of discrimination. Experiment shows that the finest ears under best conditions can correctly distinguish between a standard tone and one higher or lower than it by as little as one-third of a vibration per second throughout the five inner octaves of the musical range of pitch. Towards the extremes of the musical range, especially towards the higher end, the difference increases rapidly. This means that at the low bass C about one-eleventh, or one-twelfth, of a semitone of difference can be felt; and the function is halved for every octave upwards.

Now, how do these differences compare with the differences or mistunings we are likely to hear?

There are the mistunings that equal temperament involves, e.g., the piano with its equal semitones throughout the octave. Thus on middle C, of 264 vibrations, the numbers of vibrations for the diatonic scale and for equal temperament are:—

Diatonic	264	297	330	352	396	440	495	528
Equal	264	296.3	332.6	352.4	395.5	440	498.4	528
Difference	s 0	0.7	2.6	0.4	0.5	0	9.4	0

The average value of these differences is =one vibration. The average value of the differences between the frequencies of vibration of meantone temperament and those of equal temperament is about three vibrations per second, and includes differences of 9.7 and 6 vibrations.

Now we are not concerned with the greater or less amounts of "beating" that may accompany the grouping of the tones of a scale, nor with the kindred roughness that may arise from any similar source, such as the collision of difference-tones. Helmholtz claimed that chords of the dominant seventh in just intonation have nearly the same degree of roughness as a common major chord of the same pitch in tempered intonations. But that similarity would not lead a musician to mistake an "equal" common chord for a chord of the seventh; nor would the "equal" triad thereby acquire the character of a dissonance; nor would the chord of the seventh become a consonance in just temperament. It is such facts as these that show us how impossible it is to explain the consonance of simultaneous tones by

their ensuing beating, as Helmholtz did. Our interest at present centres round the impression that notes give of being in tune.

The tuning of notes can be tested by absolute or relative judgment. Probably only very few musicians judge by absolute ear, which in the degree presupposed by such judgment is a very rare possession. And errors of several vibrations at least would be made even by the best ears. Hence the practically universal need for preliminary tuning of instruments to a fixed standard. Thereafter relative hearing takes charge of the operation.

Relative hearing involves some sort of memory for the common intervals, and in many musicians it is highly refined and accurate. Stumpf and Meyer found a general tendency to make the interval (octave, fifth, or third) too large. For example, an excess of nearly 1½ vibrations (upper tone equals 600 vibrations) was said to be the pure interval in 39 cases for the third, 52 for the fifth, and 73 for the octave. Eighteen teachers of the Berlin High School of Music, including all the Joachim quartett, declared that a tone two vibrations in excess of the pure octave was too low in 52 per cent., too high in 5 per cent., and right in 43 per cent. of the trials. Two vibrations too few gave the impression of the true octave in 13 per cent. only. These figures refer to ascending intervals.

This seems a sad state of affairs for the devotees of just temperament. But the results for intervals on simultaneous tones was as good only in the case of the fifth, while in the thirds and octaves it was much worse. Sharpening of the third was noticed in 70 per cent. of the trials at +2.18 vibrations for successive tones, but only at +5 vibrations for simultaneous tones. For flattening of the octave the figures for 90 correct judgments were -0.45 and -3.1 vibrations similarly. If these numbers of vibrations pass in careful experiments, bigger differences will surely fail to offend in rapid performances under the stress of publicity. And, mark well, in these experiments it is not a matter of muscular inefficiency, but of errors of ear, so to speak. On instruments with fixed tones we can make the intervals as pure as circumstances will allow. But the ear will not thereby be altered in the least. Of course, with perfect intonation beating will be less, and so an exceptional purity of this kind will be attained and felt. But what instrument yields fixed tones in just intonation for general use? And if the tones are not fixed, the defects of muscular adjustment superpose themselves on the errors of hearing.

The differences of pitch that the ordinary ear can detect vary for successive tones from 1½ to 3 or more vibrations. For simultaneous tones a difference of pitch begins to be noticed with some 10 to 20 vibrations of difference in the middle range of pitches. Of course,

beating supervenes with the slightest difference and is readily noticed with one vibration per second of difference. But in group playing of any kind many tones are being played at once, and the ear has neither time nor inclination to refer every noticeable beating to its source, although the "proper" structure of part-writing enables it to place such faults very surely. It is modern music with its scorn for "rules" that has introduced seconds for sonority. Both experiment and calculation have shown that many tones of neighbouring pitch, say 265, 270, 275, 280, 285, 290 and 295 vibrations per second (which are all included within the major tone interval C to D), played together produce a periodic vibration and a tone whose pitch corresponds nearly to the average of the component rates. Why should not composers make use of this fact and direct the strings at times to play vigorously out of tune—for the sake of sonority?

This course of reflexion bring us now to the need for some means of measuring the accuracy with which a voice or an instrument produces any given pitch. Tracings have been made from phonograph records on to smoked paper which then allow the rates of vibration to be counted: a slow, laborious and uncertain method. A much more rapid and accurate means has been created by Seashore in his Tonoscope (v. Psychological Monographs, 1914, Vol. 16). The tonoscope is a large cylinder pierced by series of holes in circles. Each ring of holes contains one more hole than its neighbour on one side, and the holes of any ring are at exactly equal distances from one another all round. Rates differing by one vibration per second throughout a complete octave (110 to 219 vibrations) are thus marked out on the cylinder. For practical purposes the actual arrangement is rather complicated, but this is the principle of it. The cylinder is kept rotating at the constant rate of once per second. A sensitive gas flame is made to oscillate under the influence of the tone to be measured. Each vibration of the latter makes the flame rise and fall once, thus illuminating the cylinder, in which every hole stands out as a black circle on a white ground. Now, if the number of vibrations of the flame-tone is exactly the same as the number of holes on one ring of the cylinder, the holes of that ring will for each rise of the flame move round by exactly the distance between the holes, and so the ring of holes will apparently stand still. If the two rates differ, the ring of holes on the cylinder will seem to move slowly in one or other direction, forward if it is faster, backwards if it is slower, (A similar phenomenon is seen in the cinematic projection of large spoked running motor-car wheels. They seem to stand still or to move slowly backwards or forwards according as the rate at which one spoke comes to occupy the position of its neighbour coincides exactly or nearly with the rate of succession of the exposures of the film by the photographer.) Neighbouring lines on the cylinder will move still faster in one or the other direction. The record, therefore, is made simply by reading from a prepared scale the number of vibrations for the ring of holes that is at rest; or by calculation of the fraction of a vibration indicated by the apparent motion. Tones in higher octaves are dealt with by the necessary multiplication and calculation. The ear can be relied on to find the true octave in question.

This instrument then enables us to observe the accuracy of performance of voice or instrument. The singer stands before it and sings the appointed tones or intervals, and the pitches of his sounds are at once visible to the fraction of a vibration. This was, of course, one of the first enquiries to which Professor Seashore turned upon the completion of his wonderful instrument. And his pupil Miles (ibidem) found what we should expect from the known powers of the ear, that the voice is about equally accurate, in terms of vibrations, at all points well within its range. Men and women sing with equal accuracy, but women have a general tendency to sing sharp, while even amongst men sharpening is the more frequent. The average error of the voice in reproducing a tone given by the fork at middle C for women and an octave lower for men is 11 vibrations. And the average minimal producible change of voice for men at that pitch is 5½ vibrations, and for women 3½. Thus we see that there is a considerable fringe of inaccuracy in singing, and presumably in all performance of unfixed pitches. In its degree this inaccuracy is not so small as to be incomparable with the errors involved in ideally equal temperament. Just temperament, or any temperament for that matter, is never actually attained on instruments of unfixed pitch. It cannot be.

In fact, the examination of the phonograph records of famous voices, like those of Melba, Destinn, Alma Gluck, Frances Alda, and Emma Eames (by Mr. Schoen, Psychological Monographs, Vol. 31, 1922), shows that the singer is neither in pure nor in tempered intonation, but is slightly sharp to both of these, and a tone is almost invariably attacked below pitch when it is preceded by a lower tone, and in the majority of cases is released above pitch. The size of the error varies with the distance of the preceding tone. When the preceding tone is above the tone sung, the attack is clean.

Besides this general error characteristic of the voice's pitch, there is also a fluctuation of pitch from instant to instant. This is the familiar vibrato (vox humana). Muscular contraction of a steady kind is not a single enduring act of a muscle, so to speak; it is the apparent

result of a rapid series of "impulses" to the muscle to contract (about 10 per second). It is a familiar fact that this series can be heard as a kind of tone if the ear is put down on a vigorously contracted biceps, for instance. The tremor can also be transferred to a smoked paper as a vibrating tracing. Now the action of the voice depends upon this kind of sustained muscular contraction, and the pitch of the voice, therefore, shows a similar tremor of oscillation.

Examination by means of the tonoscope reveals it as a gradual glide to and fro from one pitch to another at a nearly constant rate of about six times a second. The average extent of the vibrato at the low range of the voice (f¹) is slightly over a fifth of a tone; or, in terms of vibrations it is 10, 11, and 12 vibrations for the low, middle (d²) and high (b³) parts of the range. The vibrato is both a pitch and an intensity (cf. vox humana on organs) fluctuation, these two being synchronous and directly proportional.

The rate of oscillation of the voice is therefore about half that characteristic of the ordinary muscle. This seems to be due to the emotional aspects of singing as a neural process. Similar tremors have been found in cases of organic cerebral lesions, whose source seems to be the alternate action of groups of muscles or their "antagonists" (i.e., those whose effect is the contrary of that of the muscles referred to, e.g., flexion versus extension of a limb). The larynx in singing rises and falls, and so involves the action of such antagonistic muscles. These emotional effects of the voice are evidently much greater than the natural tremor of sustained contraction.

Vibrato is, therefore, a natural phenomenon of the singing voice. But it appears that there are great individual variations both in the extent and in the manner of its manifestation. These are surely not altogether primary or innate differences between the nervous systems of the different singers. It is a familiar fact that vibrato can be greatly increased at will, so that at one moment it may be said to be present as such, while at another it may seem to be absent, however much it may be essential to the emotive or human character of the voice we hear. It would be interesting to know by Seashore's methods what amount of control the singer's mind actually has of it.

On the other hand, there are voices that are nearly devoid of vibrato. The man that can make but a single "tone" (?), hard and unsympathetic, shows on the tonoscope an almost steady pitch. The untrained non-musical voice sounds less hard and shows fluctuations of two to four vibrations upwards and downwards. In the untrained musical voice a slight pulsation is readily heard which covers 6 to 12 vibrations. But this pulsation and the vibrato which constitutes it are not present in every tone. In the trained voice the pulsations are

more marked. These facts would indicate that vibrato is encouraged by the prevailing methods or ideals of training. (We have heard opera singers whose pulsations suggest a chronic organic lesion in the æsthetic areas of their cortex.) And, of course, this vocal vibrato is freely imitated by instrumentalists. The tetanic tremor of the finger muscles would not suffice to produce it involuntarily on strings, and the fingers of a healthy person are not subject to the slower emotional tremor.

On the whole, then, we must admit that being in tune is an ideal that, in spite of our best efforts, we can never completely attain except on instruments of fixed pitch. Even then we have to sacrifice something for the sake of general usefulness and consistency. And what we have to yield is not so much more than—if, indeed, it is on the average as much as—we are accustomed to forgo for sake of human emotional associations.

We have thus far dealt with the actual facts of tuning. From such performances we usually get a satisfactory impression. But in many circumstances the impression of mistuning arises even when tones are objectively correct. Not that tones of the same pitch, whether instrumental tones rich in partials or approximately pure tones, will ever sound out of tune with one another. Higher partials make a tone seem brighter and brilliant, lower ones make it richer and softer. The higher partials lie so close together that speculatively they might upon occasion be considered to be flattenings or sharpenings of one another. But in no musical tone are these partials ordinarily separately distinguishable, least of all in the performance of musical works. And as there are always many of them, at least on stringed instruments, such relations even for the ear in the mass, are out of the question. Their occurrence would make orchestral work impossible. Far more likely are the personal differences of pitching already described. Artists frequently sharpen the higher tones—even by tuning up the piano—for the sake of brilliancy.

At the extremes of the musical range of pitch impressions of mistuning arise. The highest notes, though physically in tune, seem progressively flatter and flatter, the lowest ones seem too sharp. The ear seems unable to follow the physical source with such exact proportion of response at these extremes as it does throughout most of the musical range of pitch.

A further cause of the impression of mistuning is found in the obstructions of the middle ear that result from inflammatory processes. These are probably far more common in their minor degrees than we readily suppose. The deafness that such obstructions cause may be of any degree—from the slightest impairment on one side to the need for

an ear-trumpet. If one ear is acutely affected, a spoken voice may actually be heard double, the bad one being from a semitone to a tone lower and much more metallic and untuneful. When both ears are in this condition, any enjoyment of music, unless it be very loud, is more or less impossible. So there are many persons who, from an early age, can hardly hope to hear music as it really is, pure and unsullied.

Exotic music may also give rise to the impression of mistuning, in so far as its tones conform to pitches excluded from our scales. To unaccustomed ears Highland bagpipe music sounds horrid for this reason. To the rest of us it sounds all right. We even find it difficult to locate the discrepancies until the scale is played slowly enough to allow of a careful comparison. In ordinary performance the impression is merely different in character. It is easy to transfer a tune from pipe to piano, but the ethos is then lost. So for exotic music similarly. And it is notorious how travellers, judging by ear alone, identify pitches with those of our scale that differ greatly from them. So much scope does the "ear" provide for taking a given pitch for an expected one. It is easy to notice a slight general discrepancy of pitch in any performance, but occasional defects will much more readily escape notice, unless they appear on outstanding points of the work, e.g., high or sustained notes.

The era of theoretical calculations of pitch and of the resulting theoretical ideals that roused so much passion is past, we must admit. We have now to build our ideals on facts and their variations. The natural defects of hearing set the standard for our attainment. And they fortunately set it at a modest height that, in spite of its defects, our muscular action can closely approach. And here again we find, what we know is true of the single tone and its partials, that variations from theoretical purity make a form of beauty possible that would otherwise not exist. That we have seen is the raison d'être of vibrato.

H. J. WATT.

BYRD'S LATIN CHURCH MUSIC

FOR PRACTICAL USE IN THE ROMAN LITURGY

The musical activities of the great national composer whom we are commemorating at the present time, embraced almost every form of composition known and practised in his day. He thus presents a striking contrast to Palestrina, whose work (albeit the highest of its kind) is almost entirely ecclesiastical, who expressed compunction for his early madrigals, and who apparently never touched instrumental music at all. From this point of view, and in his general outlook, Byrd resembles Handel even more than Bach, although in a certain vein of mysticism shown in his treatment of religious texts, he presents closer affinities to the latter composer. In the present article we can only attempt (and that very briefly) to deal with one phase of Byrd's musical activity, intrinsically the most important indeed, and in bulk the most considerable—namely, his Latin Church music.

We may pass over the three Masses, which are well known and easily accessible. There remain his Motets, some two hundred in number, many of which are in two or more movements or divisions. As is well known to all students, these are contained in five separate publications—the first being the Cantiones Sacra, issued in 1575, by Tallis and Byrd conjointly; the second and third, two more books of Cantiones Sacræ by Byrd alone, which appeared in 1589 and 1591 respectively; while the fourth and fifth consist of two books of Gradualia ac Cantiones Sacræ, which are best known in a second edition, "priore emendatior," dated 1610.* To these must be added some 30 or 40 unpublished motets, which occur in MSS. only, and of which many are now incomplete. It will be convenient to refer to these publications merely by their dates, and to call the Gradualia, 1610, a and b. The so-called Gradualia consist mainly of settings of the Proper or variable parts of the Mass, that is, of the Introit. Gradual, Alleluja or Tract, Offertory and Communion, which are usually sung in Plainchant. The two books include the Masses for Christmas Day (third Mass), the Epiphany, Easter, Ascension, Pentecost, Corpus Christi, St. Peter and St. Paul, All Saints, as well as all the greater feasts of the Blessed Virgin. Most of these pieces

^{*}The first edition of Book I. is unknown. That of Book II. appeared in 1607.

can be sung as motets at the Offertory. The words of the Cantiones Sacræ are mostly taken from the Breviary, as is the case with similar works by Palestrina and other Continental composers. The proper Offertories in the Missal are usually very short, often consisting of a single verse from one of the Psalms. For their more important motets, therefore, composers usually selected one of the longer Antiphons or Responsories from the Breviary, where they found highly poetical and often sublime texts suitable for the most elaborate musical treatment. It will be understood, of course, that English composers naturally used the local Breviaries and other service books current in this country, of which the most important were those of Salisbury; so that we often find Byrd setting to music texts which are not found in the present Roman books.

Let us now glance briefly through the ecclesiastical year, and see what Byrd provides for liturgical purposes. For Advent there are several important motets, of which one of the most attractive is "Laetentur caeli," 5v. (1589). It is somewhat difficult, not so much to sing as to conduct, owing to Byrd's habit of rather suddenly elaborating the details (as at et exsultet terra), and setting fresh syllables to short notes; whereas Palestrina commonly uses these only as a melisma set to one syllable. "Domine praestolamur Adventum tuum" (1589), the words of which I have not been able to trace, is perhaps less attractive. A more useful one is "Apparebit in finem" (1591—words from Habakkuk ii. 3). Here again, the last five bars require careful treatment, and notwithstanding the implication of the text (et non tardabit), should be taken at a slower pace.

The motets for Christmas and the Epiphany in the second book of Gradualia are tantalising, and rather impracticable, owing to the peculiar arrangement of the clefs and voices. The treble parts are very low, while the other voice-parts hardly admit of transposition to a higher pitch. Moreover it must be admitted, I think, that the second book of Gradualia, with some conspicuous exceptions, does not on the whole maintain the high level of the first. "Puer natus" is feasible, though difficult, and "O magnum mysterium" is a quiet meditation very characteristic of Byrd. "Descendit de caelis" (1591, 6v.) is a setting for deep voices of an unfamiliar though rather attractive text from the Sarum Processional, with the Plainchant melody in the tenor. It might be practicable if transposed a third or fourth higher. "Haec dicit Dominus" (1591, 5v.) for Holy Innocents Day, is one of Byrd's most deeply expressive pieces. For Candelmas (Feb. 2) Byrd has set the entire Proper of the Mass in masterly fashion for five voices (1610 a). The Gradual and Tract would be grand if sung in their proper place in the Mass. There are

in addition some three and four-part pieces, of which "Senex puerum portabat" is a little gem which should be known to every choirmaster. "Exsurge Domine" (1591, 5v.) is a very grand motet, though long and difficult, the words of which correspond (though not exactly) to the Introit for Sexagesima Sunday: but it is suitable for any ordinary Sunday in the year.

"Emendemus in melius" (5v.) and "Memento homo" (6v., 1575) belong to the Office for Ash Wednesday. Of motets suitable for Lent plenty will be found among the Cantiones of 1589 and 1591. One of the most useful is the beautiful five-part "Miserere." " Afflicti pro peccatis," 6v., set to a text from the Sarum Processional, is a miracle of skill. Though constructed on a rigid Plainchant Canto Fermo, the composer writes close imitations or melodious homophonic passages with as much apparent ease as though he were entirely unfettered. The motets belonging to the Office for the Dead, of which there are several, may be suitably used at this time. "Peccantem me quotidie" (1575) is perhaps the most remarkable of all Byrd's early works, and is not unworthy of a place beside Palestrina's famous setting of the same text, published three years before, in 1572-which, however, it is very unlikely that Byrd had seen. The only sign of immaturity about it (if any) is shown in the great length to which it is developed. Those who have access to the score will not fail to notice the lovely effect of the unexpected major chords four bars from the end.

For Passiontide we have the incomparable "Civitas sancti tui" (1589), one of the few works of Byrd which appear never to have been forgotten. Though the words (Isaiah lxiv. 10) do not actually occur in the Liturgy, they are so similar in feeling to the Lamentations of Jeremiah, that they are most appropriate to this season. But beyond this, it is impossible to doubt that it has a closer application to the historical events of the time, and that it represents Byrd's personal view of the religious changes of which he had been a witness. An examination of other texts set to music in the Cantiones of 1589 serves to corroborate this view. With regard to the music, in its serene beauty and lofty reserve it reminds us of Palestrina more perhaps than any other work of the composer-not, indeed, in technical details but in general atmosphere. The present writer remembers to have heard that, copies of this motet getting abroad in the last century, it was actually taken to be the work of Palestrina, and that it narrowly escaped inclusion in the complete edition of that master's works. Though actually a "Secunda Pars," it has quite overshadowed its companion "Ne irascaris," which is nevertheless well worthy of attention. An unpublished Lamentation, which occurs in various

manuscripts, awaits further investigation. The Passion music according to St. John (1610 a, Sv.) is well known. At the average pitch the treble part is too low to be effective on boys' voices, and would be better sung by men alone in a lower key.

The Easter motets in the second book of Gradualia present practical difficulties. The baritone clef in the bass part seems to indicate transposition to a lower pitch, in which case they must have been intended for men's voices. This would involve a range both above and below not easily attainable now. There remain, however, two or three other Easter pieces of outstanding merit. "In resurrectione tua " (5v., 1589) is fine, but difficult. The six-part " Haec dies " (1591) is one of Byrd's most brilliant and effective pieces. Of a still higher order, even if "caviare to the general," is the four-part "Christus resurgens" (1610 a), which is a wonderful meditation on the Plainchant, like nothing so much as some of Bach's Choral preludes, or the slow movements of his violin sonatas. Who that has once heard them can forget those rolling Allelujas, swelling ever louder and louder as the different voices answer one another-" one crying to another "-while the inexorable Canto Fermo pursues its way unmoved? Was it indeed an old man's dream, and not rather a young man's vision? But to return to more practical questions, the great compass of the alto part (nearly two octaves) need cause no great difficulty if a first tenor part be discreetly arranged to bear the weight of the low notes. The second part of the motet, "Dicant nunc Judæi," is set to some quaint and attractive non-Biblical words from the Sarum books, which are not now found in the Roman Liturgy. Some three-part motets from 1610 a require further examination. Motets for three voices, like string Trios, require very perfect performance, and are apt to prove more interesting to the performers than to the listeners.

The cycles for Ascensiontide and Pentecost (1610 b) contain some good and useful pieces, but space will not allow of enlarging on these. For Trinity Sunday we must hark back to the Cantiones of 1575. "Tribue Domine" and "Gloria Patri qui creavit nos" are both suitable, though I have not been able to trace the words of either. Continental settings of the latter text are, however, not uncommon. For Corpus Christi, Byrd has set for four voices the entire Proper of the Mass (except the Sequence), as well as a number of Antiphons and Hymns from the Breviary. All except the "Ave verum" are in the eighth Mode. They are naturally of unequal value, but some are of rare beauty and tenderness, e.g., "Quotiescumque," "Alleluja. Cognoverunt discipuli," "Venite comedite." Others are comparatively simple and homophonic—"Sacerdotes Domini," "Ave

verum "—while others again are almost flamboyant, e.g., "O Salutaris." The text of the two motets beginning "Aspice Domine" (1575 and 1589) will be found among the Responsories for the month of November, while "Tribulationes civitatum" (1589) belongs to September.

It has already been mentioned that Byrd has set the Proper of the Mass for all the greater feasts of the Blessed Virgin. The pieces are nearly all in the same mode (transposed Aeolic), different sections of the Masses being thus interchangeable. They can most conveniently be sung a tone or a minor third lower, for S., A., T., Baritone and Bass. Musically they maintain almost invariably a high level of excellence. Among the Offertories, "Ave Maria" and "Beata es" are veritable gems. The Allelujas, though strictly only applicable to certain seasons, cannot be dispensed with. Some of the more elaborate numbers, such as "Post partum, Virgo," and "Gaude Maria," are among Byrd's most characteristic and deeply felt pieces. Others require voices of enormous compass, and are frankly virtuoso pieces for solo voices.

The Antiphons of our Lady, sung after Vespers and Compline, may conveniently be mentioned here. The four-part "Alma Redemptoris" is not very practicable. The treble part is very low, while the other voices do not easily lend themselves to a sufficiently high transposition. The "Ave Regina" is both useful and attractive, even if not one of Byrd's best pieces. The three-part "Regina caeli " is long and difficult. It would be best transposed a third or a fourth lower for men's voices. The five-part "Salve Regina" (1591), again, is far too long for ordinary use. The four-part setting (1610 a) on the other hand, is most useful, and musically one of Byrd's most original and characteristic pieces. It deserves a place, I think, among the first half-dozen classical settings, and may be placed alongside of (if after) Palestrina's great one for double choir, and Lasso's for six voices (1582). As a matter of fact, it reminds one of Bach rather than Palestrina-e.g., the beautiful melisma at the word valle in all the voices, or the strangely futuristic harmony which results from the progression of the voice-parts at gementes et flentes. Most of the 16th century settings of "Salve Regina" are in the first Mode, and founded more or less on the Plainchant melody. Byrd's setting provides a useful and welcome variety, being in the eighth (a major) Mode.

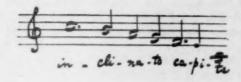
The Mass for All Saints is also set complete (1610 a), and to this festival also belongs the very fine "O quam gloriosum" (1589). Those who desire to compare English and Italian methods may profitably turn to the four-part settings of this Antiphon by Marenzio

and Vittoria, which will be found in Proske's "Musica Divina." The second part of the motet, "Benedictio et claritas," is useful for any ordinary Sunday in the year.

Lastly we must notice the remarkable series of six-part motets for St. Peter and St. Paul (1610 b). Some of these in their almost riotous exuberance quite belie the suggestion of old age on which the composer harps in the preface to the Gradualia. They have not hitherto received the attention they deserve, perhaps owing to the fact that (except where the text is strictly Biblical) the words are not printed in full, but only the opening phrase and the concluding Alleluja. The texts are, however, perfectly familiar, and fit the music in such a way as to leave no doubt (broadly speaking) as to what was intended. It is easy to understand that pointed allusions to the Papal prerogatives would have been hardly safe in the time of King James I. "Tu es pastor ovium" is nothing less than a solemn confession of faith, and musically is one of Byrd's most splendid and irresistible pieces. Some of the others are little (if at all) inferior. and are even more elaborate-e.g., "Solve jubente Deo," "Hodie Simon Petrus." "Quodcumque ligaveris." The extraordinary section of the last beginning "dicit Dominus Simoni Petro" rings like a challenge to England's rulers. In these motets, too, we may notice some of those quaint realistic touches so dear to the old masters. The use of ligatures at the opening of "Quodcumque ligaveris" (Whatsoever thou shalt bind); the rattling of the chains in "Solve, jubente Deo";



St. Paul laying his head on the block;



as well as the quick notes at "calamus scribæ velociter scribentis,"—all these remind us of a hundred passages of Bach and Handel; and though in their naïve simplicity they may provoke a smile, they really represent the same artistic principle as underlies the "Ride of the Valkyries."

One other work, which the writer found in manuscript at St. Michael's College, Tenbury, may be mentioned here—a setting of the Hymn "Petrus beatus catenarum laqueos"—the original version of "Miris modis repente liber" which occurs in the Roman Breviary on August 1st, the feast of St. Peter's Chains. It is a good specimen of the In nomine type, in which the Plainchant melody is used as a Canto Fermo in long notes, as in "Christus resurgens" mentioned above. As the hymn is found in the York Breviary, but not in that of Salisbury, the work may be referred with some probability to the composer's early years at Lincoln.

In attempting an appreciation of individual works of Byrd, much must be allowed, of course, for personal taste. Some of the pieces which have been mentioned here with special praise may not appeal to all alike, and on the other hand mention may have been omitted of others which those well qualified to judge may consider of higher value. There remains also the question of Byrd's position, and that of the English school in general, among the great composers of the age. If a tendency to exaggeration is noticeable perhaps at the present time, this is the more excusable considering the long neglect which our native composers have suffered. The present writer is not one of those who think that Palestrina's position as facile princeps in his own domain is ever likely to be endangered. And there were other "giants in the earth in those days . . . mighty men which were of old, men of renown," among whom Palestrina himself was only primus inter pares. The exact position of the English school among others cannot finally be determined until more materials are available both here and abroad. Nor can Englishmen alone claim to pronounce a final judgment. Securus judicat orbis terrarum. But what may be confidently asserted is, that the literature of the pure choral epoch is quite incomplete without the English school. Early or late it had special characteristics of its own, and at no time was it merely an offshoot of any of the Continental schools. Fayrfax is as different from Josquin, as Tallis and Byrd are from Palestrina and Lasso. And it would appear that the Englishman, John Dunstable, was in some sense the common ancestor of them all.

H. B. COLLINS.

JOHN PLAYFORD

THE centenary habit has attractions which it is difficult to resist. The game is so easy to play. With the aid of a biographical dictionary and one or two letters to the Sunday newspapers the thing is done. Of course it does not always catch on, like the Shakespeare Folio Centenary did in April or that of William Byrd promises to do in July. There has been some mention of a Weelkes Centenary this year, and a concert has even been given to celebrate that of such a minor light as Rossiter, but these do not seem to have caught the fancy of the centenary-lover. In true English fashion, a dinner has been given to celebrate the Shakespeare Folio. It is reported that the volume was toasted on this occasion. One would like to know the words of the toast. Was it: "May its price never grow less"? Or perhaps it was: " May its text ever prove an unsolved puzzle to bibliographers." Whether Byrd is to be honoured in a similar manner has not been announced. It would not be unfitting to drink to his memory, and when the effervescence of his centenary celebration has subsided one may confidently hope that he will be better remembered in the future than he has been in the past. With all these celebrations in the air it seems hazardous to suggest one more. But the Editor of Music and Letters has drawn attention to one which has hitherto been overlooked. 1628 was the date of the birth of John Playford, the music publisher of the Commonwealth and Restoration, and his three-hundredth anniversary occurs this year. Music publishers are generally not held in much estimation by musicians, and, on the face of it, one can hardly expect a very enthusiastic welcome to a celebration of one of them. But, if ever a music publisher deserved to be remembered, it is Playford, for it is to him that England owes the preservation, not only of a mass of music by men like Lawes and his contemporaries, which, without his publications would almost certainly be lost, but, also, what is even more important, of the vast treasure of folk-tunes which are to be found in the various editions of the " Dancing Master."

Like so many of the English musicians of the 16th and 17th centuries, John Playford was an East Anglian. Both in Suffolk and Norfolk there were families of the name, and the researches of Miss Middleton have identified him as a younger son of John Playford, of Norwich, where he was born in 1628. Nothing seems to be known

as to his early years and education, but, though he can hardly be claimed as a composer of any distinction, he must have received a sound musical training. There is a blank in the list of Norwich organists from about 1630 to 1660, but one may hazard the guess that -some time prior to 1648, when he appears as a publisher in London-he had learnt what he knew of music from one of the organists or choirmen of his native town. In 1650 he had the shop in the Inner Temple, " neere the church doore," which remained his place of business throughout his life, and from it he published the first edition of his "Dancing Master," a work which continued to be issued with supplements and in new editions until 1728. Like all books of the kind, every edition of the "Dancing Master" is now very scarce. Destined for the use of musicians who accompanied dancers, such works must generally have been roughly used and soon worn out, nor was their value recognised as a repertory of folk-tunes. William Chappell seems to have been the first to realise this, and it is mainly owing to him that a complete set of Playford's work is now to be found in the British Museum Library. But even Chappell never succeeded in finding a copy of the first edition, and the only recorded example is preserved in the remarkable collection formed by George Thomason (1602?-1666), a Presbyterian bookseller, whose shop was in St. Paul's Churchyard. In 1640, Thomason began to collect every book, pamphlet or newspaper which was issued in London, besides as many as he could obtain from the provinces or abroad. He continued collecting until the Coronation of Charles II., and on every title-page in his collection he noted when it was acquired. The "Thomason Tracts" fortunately escaped the Fire of London, as they were at the time housed in Oxford. Eventually they were bought by George III., and given to the British Museum. It is estimated that the whole collection, which is bound in 2,008 volumes, contains 22,255 manuscripts, pamphlets and newspapers. Thanks to Thomason, the Chappell set of "The Dancing Master" is thus completed by a copy of the first edition. It is (like all the later editions) a small oblong quarto, with a vignette by Hollar on the titlepage, and contains 104 tunes, with directions for dancing. The book is entitled "The English Dancing Master; or, Plaine and easie Rules for the Dancing of Country Dances, with the Tune to each Dance." It is dated 1651, though it was entered at Stationers' Hall on Nov. 7, 1650; Thomason has noted that he bought his copy on March 19. In all the later editions the word "English" is omitted. In the preface Playford says that "the Art of Dancing is a commendable and rare Quality for Young Gentlemen, if opportunely and civilly used. . . . this Art has been anciently handled by Athenæus,

Julius Pollux, Caelius Rhodiginius, and others, who much commend it to be Excellent for Recreation, after more serious studies, making the body active and strong, graceful in deportment, and a quality very much becoming a Gentleman." He states that "a surreptitious copy" of the book was at the Printing Press, "to prevent which having the assistance of a knowing friend, I did venture this ensuing work to the publick view, and gentle censure of all ingenious Gentlemen, lovers of this Quality." Although "The Dancing Master," since the revival of interest in Country Dances in late years, has been frequently drawn upon, no complete list of the contents and differences of the various editions and supplements has been published, nor does anything seem to be known as to the sources from which Playford made the collection. The contents increased during his lifetime from the 104 tunes of the first edition to 208 (+ 32 dances) in the seventh (1686). Thirteen later supplements and editions appeared, and it would be a useful bibliographical task to describe and index the contents of the whole series.

In 1652 Playford, in conjunction with John Benson, published Hilton's "Catch that catch can" (in later editions called "The Pleasant Musical Companion "), a book which continued to be published until about the middle of the 18th century. Other works which had a long spell of popularity were "A Brief Introduction to the Skill of Musick," nineteen editions of which appeared between 1654 and 1730, and "The Whole Book of Psalms . . . composed in Three Parts, Cantus, Medius, and Bassus " (twenty editions, from 1677 to 1757). All these works are of great interest. The "Pleasant Musical Companion " is a storehouse of the rounds, catches and lighter compositions of the English composers of the late 17th century. The "Introduction to Musick," which is really a compilation, shows in its various editions the changes which musical theory underwent: the 12th edition (1694) is especially valuable, as the third part ("The Art of Descant") was practically rewritten by no less a man than Henry Purcell. The Psalter was the last complete setting of the old Church tunes. Though from a musical point of view it shows Playford to have been only a mediocre musician, the work at least served to keep alive for nearly a hundred years the tradition of a dignified style of psalmody. These books, which are only the best known of the many collections of songs and instrumental pieces which Playford published, naturally brought him into contact with so enthusiastic a collector as Samuel Pepys. The first mention of him in the Diary is in February, 1659-60, when Pepys records that he went to Playford's shop " and for two books that I had and 6s. 6d. to boot I had my great book of songs which he sells always for 14s."

In May, 1661, Pepys "looked over a book or two at Playford's," and in 1662 he "bought the book of country dances against my wife's woman Gosnell comes, who dances finely"; in 1666 he "sat till one o'clock reading at Playford's in Dr. Usher's 'Body of Divinity.' " In 1666 he records that Playford's "new impression of his ketches " (i.e., " Catch that catch can ") " are not yet out," owing to the Fire of London. But in 1667 he bought the book, and found that it "hath a great many new fooleries in it." In the same year on a walk from Greenwich to Woolwich, Pepys was " all the way reading Playford's 'Introduction to Musique,' wherein are some things very pretty." All these books were issued from Playford's shop near the Temple Church, of which since 1653 he had been the Parish Clerk. From advertisements in his various publications it seems that books were not the only things in which he dealt. In 1669 he advertised "All sorts of Rul'd Paper for Musick ready Ruled Also very good Inke to pricke Musick," and (in the same year) also the " Excellent Cordial called ' Elixir Proprietatis,' a few drops of which drank in a glass of Sack or other Liquors, is admirable for all Coughs and Consumptions of the Lungs and inward Distempers of the Body, a Book of the manner of the taking of it is given also to those who buy the same," and further, "Virginals and Harpsicons at reasonable Rates " are to be obtained at the same place. The advertisement is altered and amplified in 1670: " At John Playford's Shop in the Temples Is sold that excellent Cordial (against all Hypocondraical Diseases and Convulsions) called Elixir Proprietatis. And also the best Spirit of Amber, which is brought out of Germany, the like not made in England, both of them in small Also Doctor Turner's Dentrifices to cleane and preserve the Teeth. And Sir Kenelme Digby's Sympathetical Powder." Some years later he announces that "there likewise all Gentlemen and Ladies may be furnished with all sorts of curious Prints (as well Foreign as Domestic), either with frames or without, very ornamental for Closets or other Rooms." In fact, Playford's combination of a book, music and drug store seems, by two hundred years, to have anticipated the enterprise of Sir Jesse Boot.

In addition to his business in books, musical instruments, prints, tooth-powder and cordials, Playford's income must have been increased by the profits of a Boarding-School which was kept by his wife. This is first heard of in an advertisement in "Select Ayres and Dialogues" (1659), which states that "In Islington, over against the Church, is kept a Boarding-School by Mrs. Playford, where young Gentlewomen (for the Improvement of their Education) may be Instructed in all manner of Curious Works, as also Reading, Writing,

Musick, Dancing, and the French Tongue." Mrs. Playford died in 1679, and the school must then have been given up, for in April, 1681, the Islington house is advertised for sale. It is described as " a fair House, containing above Twenty Rooms, one whereof is fortyfive foot long, with Out-house for a Wash-house, Coach-house, &c., with a convenient Court-yard before the said House, and behind it a fair Garden opening into the best Fields for Air about the Town; also two pleasant Summer-houses in the said Garden." At the same date Playford announced that "his dwelling-house is now at the lower end of Arundel Street, over against the George." Here he must have remained for the rest of his life. But his health was evidently failing and a note of querulousness begins to appear in his prefaces. In that to the Fourth Book (1683) of his "Choice Ayres and Songs," he says that "A certain Pretender to Musick publickly declar'd that in my last Book there was but three good songs, the rest being worse than common Ballads sung about Streets by Foot-boys and "I have not imposed Trash upon the Buyer, like the Publishers of the late Collection of Songs in Octavo, wherein there is scarce one line of Musick tune in the whole Book." And in the Fifth Book (1684) of the same series, he says: "My pains and care has ever been not only to procure perfect Copies, but also to set their tune and well printed: But now I find my Age, and the Infirmities of Nature, will not allow me the strength to undergo my former Labours again." This was his last publication, and his business was handed over to his son Henry, who carried it on for over twenty years. The exact date of Playford's death has not been ascertained. His unsigned will is dated 5 November, 1686, but it was not proved until 1694. Musgrave's Obituary gives the date of his death as 1693, but against this is the fact that in 1687 there was published "A Pastoral Elegy on the Death of Mr. John Playford," words by Nahum Tate and music by Henry Purcell, so that it seems almost certain that he died in 1686. In what esteem "honest John Playford " was held is shown by this Elegy:

"Lament for Pious Theron's Death,
Theron, the good, the friendly Theron's gone."

Such a tribute from a great musician to a music-publisher must be almost unique. But it may well be endorsed by posterity, and the centenary of his birth deserves to be celebrated in gratitude for the music which he has preserved for us.

W. BABCLAY SQUIRE.

HENRY EDWARD KREHBIEL

Music in America has suffered a grievous loss in the death on March 10 of Henry Edward Krehbiel, for forty-three years musical critic of the New York Tribune, and for more than half a century an active writer on musical subjects. He was the leading musical critic of America; and, indeed, it is not too much to say that he had set musical criticism in the United States on a plane that it had never occupied before, in respect of technical knowledge, breadth and penetration of view, critical faculty and power of expression. He had a native intellectual vigour that would have put him among the leaders of any profession he might have adopted. He chose one that he loved with an enduring passion, and that kept him a poor man. He was a great scholar; but he was a graduate of no university. He had the culture of an intellect that could assimilate the best and was eager to; a culture that was the fruit of wide reading and delight in literature—such, indeed, as is not always brought away from the university. And this culture underlay all his writing and shone through it.

Born in Ann Arbor, Michigan, on March 10, 1854, the son of a Methodist preacher of German origin, he first studied law in Cincinnati; but he soon found himself driven to newspaper work, wherein the rewards are speedier, by the res angusta domi. And a newspaper man he remained to the end of his life, proud of journalism as a liberal profession, incessantly jealous of its honour and high standing. And it should also be said that, notwithstanding his German ancestry, there was no fiercer indignation than his at the German wickedness of 1914 and thereafter.

In 1880 Krehbiel was appointed musical critic of the New York Tribune and remained in that post uninterruptedly till his death. His writing was at once recognised as the most authoritative of its kind in this country. When the Wagnerian dramas were first produced at the Metropolitan Opera House in the '80's, his articles were among the most influential contributions to the current literature of the subject and did much to win the New York public to an appreciation and love of Wagner. In the days when the latest works of Brahms, Dvorak and Tschaikowsky were eagerly looked for in the concert programmes, Krehbiel's analyses and criticisms were potent in their behalf. He was one of the first in America to discern the power of the young Russian school when it was young. When Dvorak was living in New York and trying, by his example, to

induce American composers to make use of the native negro elements in music as material for composition, Krehbiel was one of his strongest supports.

Folk music was one of the great and enduring passions of his life. He made many original investigations into such manifestations of it as come into the ken of American students; and he was always an ardent champion of its use for artistic purposes. His attention was devoted chiefly to the negro folk tunes and "spirituals," of which he had made a large collection and had an intimate first-hand knowledge. His work on this subject was finally embodied in his book, " Afro-American Folk Songs" (1914), the most important discussion of it. He contended that these songs were the nearest to folksongs that America had produced, or could produce under modern conditions; that they are truly American, as having been created in America and as giving voice to an important section of Americans; and that, while they are not the product of the dominant race, they have qualities and characteristics that have made them appeal strongly to that race. He did not succeed in gaining universal acceptance of these views; but Krehbiel's preaching of folk-song in season and out of season has had a large influence on the composers of America.

As a critic Krehbiel had an unusual power of analysing and penetrating to the essential quality of a musical work on the first hearing; the faculty of clear exposition and, for music that he loved, an ardent passion and a persuasive eloquence on its behalf. His knowledge of music, of its history and its schools, as of the literature of criticism and biography, was vast. His memory was extraordinary, of a sort to put his knowledge constantly at his service—and not only at his service, but at the service of all serious enquirers, friends or strangers. His mind was open to the newer manifestations of music so far as they seemed to him to be based on the elements of true progress, on beauty and sincerity. Because he could find neither beauty nor sincerity in many of the latest musical productions, he was by some regarded as a reactionary. He was unquestionably above all a classicist-a lover of Bach, Mozart, Beethoven, Schubert, of the greatest men of the past who have erected the deep and permanent foundations of the art. Of Mozart and Beethoven, especially, he was a profound student and had an intimate knowledge; and concerning the latter he was a great and original authority.

Of that he has left an enduring monument in his edition of A. W. Thayer's "Life of Beethoven." The third volume is almost entirely Krehbiel's own interpretation of the vast mass of material and notes collected by Thayer and never worked up by him. In some important

particulars it has given a new view of Beethoven's last years; and it is written with as much acumen and penetration as sympathy and

It may truly be said that this quality of reverence for the great He was wroth with any men of the past made Krehbiel a purist. who sought to tamper with the works of the masters as they left them; and this brought him into some notable conflicts with men who thought that their reputations entitled them to do what they pleased. Krehbiel had always a respect for sincerity, mastery and disinterestedness in art and artists, and a hatred of the pretentious, the feeble, the bombastic, the insincere and the self-seeking. A man of positive opinions, fearless in putting them forth, incorruptible in his honesty and scornful of ulterior influences that have no place in music, he made enemies. He never thought of staying his pen when there was evil to be attacked. But he made friends and admirers innumerable in the half-century of his work; and he left a great influence behind him. Such a half-century of work does not go for nothing.

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1880" (1880).

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"Review of the New York Musical Season"; five volumes (1885-6-7-8-9).

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"Chapters of Opera" (1908).

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American Editor of Grove's "Dictionary of Music," second edition.
Editor, "Lavignac's Music and Musicians, in English," with additions.
Editor, with Russell Sturgis, "The Bibliography of Fine Arts," Music Section.

Editor, and Reviser, "Thayer's Life of Beethoven," with additions.

Translations: Courvoisier's "Technics of Violin Playing" (1880).

Kerst's "Beethoven, the Man and the Musician" (1905).

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English translations and stage versions:

Nicolai's "The Merry Wives of Windsor" (1886).

Berlios's "The Trojans in Carthage."

Paderewski's "Manru" (1902).

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RICHARD ALDRICH.

BYZANTINE MUSIC

BYZANTINE music is the heritage of the Greek Orthodox Church and as such is the source of Russian, Serbian and Bulgarian ecclesiastical music. But of these the Russian was entirely transformed at the end of the Middle Ages: Serbian and Bulgarian have remained closer to tradition, but the lack of documents makes their early history obscure. We must go to Greek manuscripts and treatises for most of our information. Byzantine music was cultivated wholly for sacred use. The monasteries trained the singers and copied the hymn-books; and, whatever secular music there was in those days has entirely perished and we have little or no information about it. The musical notation passed through the following stages:—

- (1) Ecphonetic (5th-13th centuries): recitation-marks used in the reading or intonation of Scripture. These had no definite pitch or melodic value. Such semi-musical recitation has survived, in a modified form, to the present day.
- (2) Early Neumes, variously known as Palæobyzantine, Linear Constantinopolitan (also Notation Mixte and Strichpunktnotierung). Many varieties of Neumes are found, ranging from 1000-1200 A.D. They resemble the earlier Russian Neumes, but, like them, have not been definitely deciphered. Possibly they only gave vague indications of the melody, without precise intervals. Some of the neumes are found in Western Latin MSS.; but no clear evidence of parallel usage has yet been traced.
- (3) The Round or Hagiopolitan Notation, invented between 1150 and 1200, seems to have soon ousted the Linear System. This notation can be read. The neumes are interval-signs, forming a chain of progressions from the beginning to the end of every hymn. The starting-note is given by a signature (Martyria) which depends upon the Mode. Signs for stress, expression and time also occur.

The Rhythm. No regular time can be traced. The music, therefore, resembles Plain Song and closely follows the words (which are nearly always in rhythmical prose, like the Psalms), but allows occasional florid passages and ornamental figures. According to the accepted method a quaver is put for every plain note and a crotchet for a prolonged note, shown by some length marks (called Argiai) in

the MS. The last note is written also as a crotchet, because it is naturally, as at the present day, held on a little.*

Scope of the Round Notation. All MSS. up to the 15th century containing Byzantine music were intended for use in Church and give the melodies of various kinds of hymns sung throughout the year: they exclude the Psalms, responses and all the Priest's part, which were presumably too familiar to need noting. But in and after the 15th century we find Liturgies fully set to music and also Acclamations of the Emperors, the only semi-secular specimens surviving. The Round Notation was known all over the Greek East. Manuscripts written in it are found in the chief Levantine Libraries, as well as in many Western collections (e.g., at the Vatican). Athos and Sinai being the chief copying and distributing centres, have also retained the richest store. The Russian Neumes were not influenced by the Round Notation, as they had branched out on a separate track.

- (4) The Cucuzelian System. John Cucuzeles (floruit 1800) was a famous precentor and composer, who enriched the notation with new symbols. He aimed at a more ornate style of music; but he and his followers went on copying the old hymns without much change and kept their innovations for new melodies adapted to words not previously set. But by the 17th century the new fashion had invaded all sections of Byzantine music. The style is florid, pays little heed to the sense of the words and sometimes inserts meaningless syllables to carry the notes. Subdivisions of the beat (semiquavers and dotted notes) become frequent. The large number of subsidiary marks seems to show that the singers no longer read the interval-signs accurately, but used the new symbols as an aid to memory. The writing becomes less bold and clear. Everything points to a decline of the art. By the 18th century the output of MSS, was restricted to meagre selections from the liturgies and hymnbooks. With this is often found the Papadike or Singer's Handbook, which may have been partly the work of Cucuzeles. This has given us the key both to the Cucuzelian and to the Round Notation, the values of the interval signs being the same in both systems.
- (5) The Chrysanthine or Modern System. In the early 19th century the musical MSS. were hardly understood; and the singers

The only addition is the single barlines, which are determined by the accents in the Greek texts, not by the quantities, which were obsolete in the Byzantine age. All authorities seem to agree that at the time when most of our hymns got their music, i.e., the eighth century and later, all traces of quantity had disappeared from the spoken tongue. Even such artificial works as the iambic hymns of St. John of Damascus also have an accentual scansion, while the sacred odes of Romanus, in the early sixth century are purely accentual. The earliest extant musical MSS, show the accentual treatment clearly.

were entirely under Oriental influence. Chrysanthus, a Greek Archimandrite, did not aspire to change the practice of his day, but chiefly to simplify the notation, so that it could be printed. His system, published in 1821, is still in use. He reduced the number of interval-signs and rhythmical marks, but introduced new symbols for chromatic alterations. As an aid to beginners he invented a kind of sol-fa, which was probably the most useful feature of his system. (The syllables ni, pa, vou, gha, dhi, ke, zo, are the notes from c to b.) His theoretical writings show some confusion and misunderstanding—a natural result of yoking the theory of Ancient Greece to the practice of Turkey and Persia.

Since 1870 there has been a movement in favour of European music in the Greek Church. Some composers have attempted to harmonise the traditional melodies for a four-part choir. The result has been deplored by the most competent critics, both Greek and foreign; but the issue of the controversy is still doubtful. It need hardly be said that in spite of Oriental influence, many ancient melodies have been preserved in Byzantine hymnody.

The system of eight ecclesiastical modes seems to The Modes. have been invented in the Eastern half of the Roman Empire, since the Gregorian modes were frequently known by Greek names. It is therefore reasonably assumed that the system was common to the Eastern and Western branches of the Church; and it appears to have remained so throughout the Middle Ages. There were no doubt many hymns already in use when the Modes were invented that did not exactly fit into the scheme, and so led to small irregularities. The four authentic modes, using the natural scales, had the following starting notes, which were also the regular Finales:-Mode I. a, Mode II. b, Mode III. c1, Mode IV. g (rarely d1); the Plagal modes (requiring by) the following: -I. Plagal d. II. Plagal e. III. Plagal f or By (hence called Barys or Deep), IV. Plagal g or c. Byzantine music could in addition use the chromatic tetrachord g ab ba c1 or d ep f# g; but until the 17th century this was mostly confined to short episodes; and not until later do we find entire hymns employing it. This variety may have arisen from the Ancient Greek chromatic e f fs a, but its popularity was fostered by Oriental influence, as Arabic and Turkish music use it freely, while Modern Greek Church and Folk music also have it. Irrational intervals, 3/4ths, 5/4ths of a tone (and others), are frequent in the Chrysanthine system; but analysis shows this system to be mainly of Eastern origin, even the names of the scales being borrowed from Arabic through Turkish.

General Characteristics. Medieval Byzantine music has a strong likeness to Gregorian. The differences are largely due to the differ-

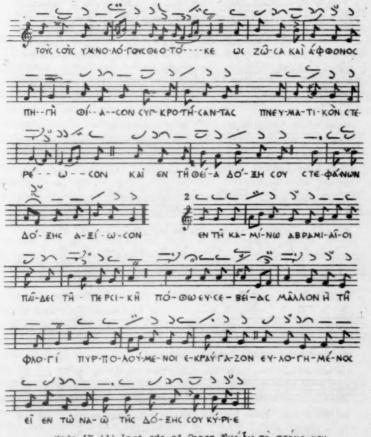
ence of rhythm in the words, and to the fact that Byzantine music was not properly choral. The choir might join in the melody or some voices might hold a drone on the fundamental note, but in essence the music contains nothing that a single cantor could not render. The absence of instruments left the voice greater freedom. No accompaniment was or is allowed in the Greek Church, although there seem to have been two organs in the Palace at Constantinople in the 15th century. No instrumental music is extant from the Byzantine age. The florid writing in vogue since the 16th century and the nasal singing heard in many churches are undoubtedly alien to the best traditions. In the decipherment of more manuscripts lies the best hope of an increase in our knowledge of the subject, especially as the data of medieval treatises are scanty. We may fairly believe that Byzantine music in its best days was a genuine artistic creation, full of devout simplicity, bringing life and glory into the Church's praise.

Examples of the Round Notation: two hymns in Mode IV, Finalis g. (The small double-bars mark the ends of phrases or Cola. The single bars are merely aids to the singer and do not answer to any special sign in the MS.)

Examples of Modern Notation. (Here the plain notes are transcribed as crotchets.) The hymns are (1) Part of the Acathistus, Mode IV. Plagal, Finalis c. (2) Doxology, Mode III. Plagal (Barys), Finalis f.

H. J. W. TILLYARD.

Authorities.—For English readers the handiest book of general information on Byzantine Hymnography is J. M. Neale and S. G. Hatherly, "Hymns of the Eastern Church with music." The "Anthologia Gree. Carminum-Christ." of W. Christ and M. Paranikas, gives an exhaustive account in Latin of the various types of Byzantine hymns, together with a sketch of modern Byzantine music. (In those days the medieval systems had not been deciphered.) For the music see Am. Gastoué "Introduct. à la Paléographie Music. Byz."; O. Fleischer "Neumenstudien," T. For the English reader my forthcoming book, "Byzantine Music and Hymnography" (Faith Press) or my articles in "Musical Antiquary," 1911, p. 80 and p. 154, and in "Annual of the British School at Athens," vol. xxi. and vol. xxii. More special studies are:—Dom Ugo Gaisser, "Les Heirmoi de Pâques dans l'Office gr."; J. Thibaut, "Monuments de la Notation Ekphonetique et Hagiopolite de l'Eglise grecque . . . à la Bioliotheque Imp. de S. Pétersbourg," and his "Origine byz. d. l. Notation neumatique de l'Eglise latine." For the modern system P. Rebours "Traité de Psaltique." Those who can read German are also referred to Dr. E. Wellesz' articles in "Oriens Christianua," N.S., vol. vi., p. 91, and vol. vii., p. 97.



Node IV (1) Last ode of Canon Avoiss to Toma Hou (2) Ode VII of Canon Daharons to iguspaiou



SOME EXOTIC ELEMENTS OF PLAINSONG

In his famous work on the Hymns of the Greek Church—
"L'Hymnographie de l'Église Grecque," 1867—which contained an account of the re-discovery of the metrical forms of Byzantine Churchmusic, Cardinal F. B. Pitra, in pointing out the need for comparative research among the religious poetry of the Syrians, Chaldwans, Armenians and Copts, raises the question: "Ought we not to go thoroughly into the hymnography of the Syrians, Chaldwans, Armenians and Copts, who, if they did not precede the Byzantine melodists, may at any rate have preserved the ancient chants of the Church with greater fidelity? Who knows whether, among the fragments of the Nestorian and Jacobite liturgies, musical science may not be able to bring to light some primitive melodies, buried beneath the heretical accumulations of fifteen centuries?"

This hint of the gifted scholar who has penetrated farther than anyone else into the secrets of the music of the Eastern Church, seems to have made little impression at the time upon students of musical history; only in the last few years have their investigations among ancient liturgies and the beginnings of musical notation led them to pay closer attention to the problem of the origins of the chant of the Western Church.

When we take up any of the ordinary handbooks on musical history, we find in the first place a considerable section devoted to Greek music, i.e., to the musical theory of the ancient Greeks, since very few of the actual melodies have been preserved: next we have a lengthy dissertation on the Greek scales and their various treatment by different authors of antiquity; and then we pass without a break to the musical theory of the Middle Ages and the Ecclesiastical Modes, which are regarded as a development of the old Greek scales. Now anyone who writes in this way has failed to realise that such a presentment of an apparent development is a purely imaginary fabrication, which can be explained only by a complete ignorance of the course of cultural progress as well as of the outstanding events in history.

Just let us face this one fact alone: between such Greek melodies as we possess and the very earliest specimens of the music of the Western Church which we are able to reconstruct out of the neums. there lies an interval of about a thousand years. This period witnessed the accomplishment of the greatest revolution that Europe had ever known; the ancient culture had perished utterly; nomadic tribes, with no tradition, strange in their speech as in their thought, had inundated the provinces which had hitherto belonged to the Imperium Romanum: legions of Oriental slaves (among whom Christianity had found a specially fertile soil, prepared as it was by the Mithras-cult) had thrown off their fetters and become the proletariat of many countries. As artisans and sailors they populated the coastal towns of Italy, Greece, and Gaul; as builders and merchants they came by way of the great rivers into the very heart of Gaul and reached the Rhine; from Syria they journeyed as far as Spain and even Ireland. And in all these centuries of confusion are we to suppose that music underwent no greater change than what a hundred years of the modern world would suffice to bring about-or that the influence of the old Greek melodies was really so strong that these were taken as the foundation of the hymns and chants of all the countless nationalities that gradually came under the influence of Christianity?

The radical error here has been the assumption of a universal Imperial culture which, starting from Rome, was disseminated through every part of the vast Roman Empire; this culture originated with the ancient Greeks, and so, it was argued, the Middle Ages, in adopting Roman culture, took over with it also the culture of ancient Greece; accordingly, the ecclesiastical music of the Middle Ages, which sprang from the soil of the old Roman Empire, was merely a continuation of the music of ancient Greece. But that is not the truth. The medium by which Rome bound her different provinces together was not a common culture, but a common civilisation. It was only the officials and the upper classes in the big cities that became Romanised, or, in the East, Hellenised; in the smaller towns and in the country the people still spoke their native language, carried on their own traditional arts and crafts, and sang their own national songs.

We see, then, that Rome was not the centre of an artistic movement extending to all parts of the Empire, as has hitherto been supposed; neither was Byzantium, nor Antioch, nor Jerusalem: no single city could possibly originate a movement so strong as to change the outlook of the culture of the whole civilised world. It becomes more and more evident that in the first centuries of the Christian era broad streams of culture made their way from the plains of Iran, in Central Asia, through Mesopotamia and Armenia to the great cities on the shores of the Mediterranean. This eruptive

impulse from the heart of the Orient must be regarded as a reaction against the Hellenising process which had been going on during the last centuries B.C., and as representing a part of the mighty struggle between Europe and Asia in the early ages, which found its most conspicuous expression in the wars between Persia and Greece, Alexander's expedition to India, and the Parthian campaigns of the Romans as inheritors of the Greek tradition. The Byzantine rulers who succeeded to the Imperial power of Rome were committed to unceasing warfare in defence of their kingdom, and, indeed, of the whole of Europe, against Persians, Arabs, Seljuks, Mongols and Ottomans; and each prolonged struggle was accompanied by an important international exchange of cultural influences.

We must consider that after each of the great Roman campaigns in the East thousands of prisoners were brought back, to be slaves and labourers, and that these preserved their national customs in their new home; while, on the other hand, swarms of Romans and Byzantines were captured by the Persians and their military successors, and carried away into Asia. The perpetual wars, the constant shifting of the Asiatic legions to the West, of the Western legions to the East, laid the foundation within the bounds of the gigantic Empire of an international intercourse, which, as our own time has been the first to recognise, was favourable to the spread of religious ideas and forms of worship.

These premises once established, it is easy to see that the prevailing view, i.e., that the early music of the Church was the product of the old Greek music and the psalmody of the Jewish Temple, that it found its way to Rome and thence spread to every part of the Empire, must be re-examined. It was only possible to maintain this theory so long as musical research busied itself exclusively with the Gregorian chant. Thibaut, it is true, to whom we are indebted for some valuable works on Byzantine musical notation, in his "Origine Byzantine de la Notation Neumatique de l'Église Latine," 1907, had advanced the theory that the neums of the Latin Church, like those of all primitive Christian communities, sprang from a system of notation which obtained in Constantinople, and that in consequence the Gregorian melodies must be considered as dependent upon the Byzantine. In my work, " Ecclesiastical Music in the Byzantine Empire " (" Oriens Christianus," N.S. vi.), I have tried to show that this hypothesis is untenable, and that the Latin neums were developed not from the Byzantine, but side by side with them; both go back to Eastern chants which had spread westward to the great metropolitan cities of the East, to Odessa, Antioch, Damascus, Jerusalem and Alexandria. Christianity had already at this early date forced its way beyond the circle of Judæo-Hellenic culture and come into touch with a world that was purely Oriental. We must not, of course, think of the early Christian chants as artistic compositions, but as folk-songs; the adherents of the new faith would have sung their hymns and spiritual songs to melodies which were already current among them. More recent investigations indeed have proved that invocations, such as the "Kyrie eleison," go back to pre-Christian liturgies, and that the first part of the Armenian Mass shows clear traces of an incantation against the Devil, which dates from pagan times.

In Eastern Church-music three divisions are clearly to be distinguished: (1) The Solemn Reading; (2) the Hymns and Antiphons; (3) the Acclamations. The solemn reading of the Holy Scriptures in a sort of chant corresponds to a method of delivery which prevailed throughout antiquity. At first it was restricted, probably, to a recitation on one note, with a final cadence; gradually, however, it assumed more ornate forms, so that in many cases a definite melodic treatment took the place of the simple recitation. We can reconstruct this development quite well by studying the history of musical notation; at first we find only a few strokes and signs placed over the text, but gradually these accumulate, and assume the appearance of the early neumed MS. of the Latin Church. This method of notation is found throughout the whole circuit of the Mediterranean coasts and would seem to have penetrated inland almost immediately.

The Acclamations have their origin in those impassioned outbursts of joyful emotion which are found in the chief division of this class, the Alleluias. As the melodies associated with the Solemn Recitation are the offspring of the words, so in these invocations the melody is the primary consideration, and the words but secondary. Traces of this ecstatic style of singing are to be found in the extraordinarily florid melodies of the Armenians, in the Byzantine Acclamations, which were not confined to religious purposes, but were employed also in official welcomes to the Emperors, and even in the late mediæval songs of the Byzantine "Maïstores."

In the Hymns and Antiphons, as distinct from the other two classes, we find works which are the creation of a popular religious feeling. These early hymns afford a welcome contrast in the matter of words to the artificial productions, imitated from antique models, of certain later scholars, who attempted to adapt both matter and form, with slight alterations, to the service of Christianity. This eclectic development became separated from the main current of healthy popular poetry which had its rise, as we now see, in Syria, Armenia, and Asia Minor.

It is clear, then, that neither the words nor the music of the chants of the primitive Church have any connection with ancient Greece, since they originated not with the upper classes, who were steeped in Greek culture, but from the great mass of the people, who had no conception either of ancient metre or of musical theory. In the subsequent theoretical introduction of the eight Ecclesiastical Modes—the Octoechos—I am inclined rather to see a later attempt to fit the various melodic forms of the Eastern tunes to a scale-system borrowed from the ancients. This idea occurred to me whilst analysing the chants written in the eight-mode system of the Serbian Octoechos; but afterwards I went farther back, and discovered that these differed from one another not in the fact of several chants belonging to one Mode, but in the predominance of certain melodic motives and cadences, which are constantly repeated in the chants of any particular group.

The practice of antiphonal singing was borrowed by the early Christians from the service of the Jewish Temple, and was soon introduced into the Syro-Christian liturgy. If we bear in mind the leading rôle that was played in Western civilisation by Ravenna as an outpost of Syro-Aramaic culture, we shall see a heightened significance in the fact that antiphonal singing was first brought from Antioch, at that time the chief seat of Syrian Christendom, by way of Ravenna to Milan in A.D. 386, and first became general in Rome under Pope Celestine I. (422-432).

Important results should also be obtained by examining the various kinds of musical notation found in the Latin Church, and tracing, by comparison of the different MSS., the spread of the early Christian chant throughout the West. We might thus arrive at some very interesting conclusions as to the mutual relationship of the variants to be found in the neums of Metz, Trèves, and St. Gall, and, furthermore, we might be able to see to what extent these are related to Eastern liturgies. We learn from F. Cumont's very instructive volume on Eastern religions in the time of Pagan Rome, the fact, to which far too little attention has hitherto been paid, that Italy, as well as all the Roman colonies on the Mediterranean coast, was permeated by powerful Eastern elements, and that the Orientalising process continued in undiminished force throughout the first few centuries A.D. As a result of this intercourse there set in from the very beginning of the Christian era a regular colonisation of the Latin provinces by Syrian merchants, who gained an especially firm foothold in the South of France, and made their way along the Rhone and the Saône to the Rhine, as far as Trèves and Aix-la-Chapelle.

It was by these routes too, that the special chant for the Alleluia,

so rich in melismata, was introduced into Europe by Christian artisans from Syria and Armenia; it seems to have met with special favour in the South of France and St. Gall. The recognition of this fact renders quite untenable the generally accepted theory that this form of Plainsong was of Byzantine origin. The occurrence of Byzantine formulas and the general employment of the Greek language in these districts in no way contradict my theory; these are explained by the fact that Southern Gaul, together with Helvetia, was from the beginning permeated to a far greater extent by Hellenic than by Latin culture; in fact, it was the Hellenistic influence that prepared the way for the flood of Orientalism which followed.

The appearance of Armenian masons and artificers in the train of the Syrians and the tribes from Asia Minor affords the solution of many a riddle in the history of culture, such as, for instance, the ground plan of the Cathedral of Aix—the model for which, as Strzygowski has shown, is to be found at Etschmiddzir—and the occurrence in Merovingian MSS. of the Armenian fish-and-bird ornament. If we take this fact into consideration we have an easy explanation of the peculiar variants that are met with in the history of musical notation; we need no longer assume a roundabout Irish influence upon the French neum-system in order to account for the differences from the Latin neums which we occasionally find there.

These peculiar forms are to be explained in the following way. The Christians of Armenia, Syria and Asia Minor brought the Eastern neums with them by the sea route to France, Spain, and even to Ireland; from the South of France the system made its way first along the Rhone, then along the Rhine, where flourishing monasteries abounded, and the neums preserved their distinctive national type, according as the newcomers were Armenians, Syrians, or inhabitants of Asia Minor. As these forms gradually assimilated with those already in use in the various religious houses, there arose those unusual notations for which it has been impossible to account on the assumption of a purely European origin.

If we were to treat the Gregorian melodies in a similar way, and to search for the different national types that underlie them, there is little doubt that we should soon arrive at some most surprising results. One has only to search the monastic annals and chronicles to establish the fact of the gradual introduction and spread of these national chants, nor can one fail to be struck by the number of Oriental names to be found in monasteries situated in the very heart of Europe.

Some similar sort of investigation dealing with the influence of one

nationality upon another would be of great assistance towards a history of the earliest period of Church-music; for without some such foundation doubts will always arise as to how far a mutual exchange of ideas took place in the particular monasteries in which we have to assume the birth of a tradition. As soon, however, as we abandon the standpoint of a "purely European" origin from our investigations of early Church-music, the threads begin to disentangle themselves, and we recognise in the facts before us one more manifestation of the age-long struggle between East and West for intellectual mastery.

EGON WELLESZ.

Trans. Paul England.

MUSIC AND MEDICINE.

The old legend of Orpheus has fascinated humanity throughout the centuries. In us, that story of the attraction of music for animals arouses so much scepticism that its charm is destroyed by our attitude of tolerant amusement. However, the stories of Orpheus and of the Pied Piper of Hamelin do not seem entirely imaginary when we read of similar experiences occurring so recently as last century, and vouched for by scientific observers. Dr. Chomet, in a book published in 1874, "Effets et Influence de la Musique sur la Santé et sur la Maladie," narrates the following adventure with lizards near Naples, which I translate freely:—

"Sitting in the shade of a large tree, I was humming the air of an Italian opera. I was looking at the beauty of the country when I heard, quite near me, a rustling of dry leaves, which made me start. On looking towards the direction from which the sound came, I found myself surrounded by a large number of the little grey-green lizards so common in Italy. When I made a movement the little animals sped away. I paid no more attention to them, and began again to whistle the same air. Imagine my astonishment when I saw flocking around me again the same audience! Watching them carefully, I continued my music. In the movement of their flanks, the agitation of their bodies, the expression of their eyes, I seemed to recognise in them a sensation of pleasure. I redoubled my attention, and tried to give the best rendering of my song. The lizards, charmed, even fascinated, seemed to draw from those notes so keen a pleasure, that full of confidence in me they were no longer afraid of my quick movements, and permitted me to approach quite close to them and touch them.

Dr. Chomet devotes many pages to a recital of the effects of music, performed in the interests of research, in Zoological gardens, beside the cages of elephants and other animals. A perusal of his pages leaves one unable to doubt that the music not only held the attention of the animals, but even evoked, according to its rhythm and character, varying degrees and types of emotion. Now it will be admitted that animals cannot respond to music from the same intellectual causes as mankind. In the strange language of musical sound there must, therefore, exist certain emotional and physical factors common to men and animals.

As a recent convert to music, I regard the subject from an inexperienced, but perhaps, therefore, a less prejudiced and certainly an unfamiliar angle. The exceeding difficulty of mastering the piano deterred me from early youth from venturing into the world of music, and the intense boredom resulting from every attendance at a concert led me studiously to avoid that form of entertainment. When at length a fortunate chance made me the possessor of a piano-player, a new pathway to a totally unexpected world was opened up.

As a student of humanity from the standpoint of a physician, I have been greatly interested in the relationship of music to medicine. That a good concert was followed by a physical sensation of well-being was one of the first facts to attract my attention in connection with music. Once this restorative effect had been observed, it became considered more carefully. Similar and diverse physical conditions, apparently induced by listening to music, were remarked in other people, in individuals of varying ages, temperaments and grades of intelligence. There was soon, in my opinion, no doubt that in a great number music produced alterations of a physical nature.

That these alterations were primarily of emotional origin was the next hypothesis demanding investigation. Leaving apart the case of the trained musician, music appears to affect the average man in two distinct ways: there are those who associate with it a definite idea or vision; there are others who find in music only the expression of a subjective mood. I am uncertain as yet whether the physical effects are as marked in the former type of listener as in those who regard it rather as another language, indeed the sole language fitted for the expression of their highest aspirations. On this point I should greatly value the assistance of my readers; if they would kindly send me their observations it would aid my research. My impression is that with the latter class of mind the emotions are more readily responsive and, therefore, as one would expect, the physical effects are more marked. Where a definite idea, or a train of consecutive thought, is aroused by music, there must be present a degree of intellectual work which acts as an inhibitory influence on emotion. Hence, one would expect the expert in music to be so influenced by his knowledge of the conformation of a musical work that his reasoning faculty must be more stimulated than his feelings. As emotion is the cause of the physical effects of music, those in whom music awakens thought, as much as or more than emotion, probably do not display as profound physical changes under its influence.

The determination of this matter is by no means so academic a question as may on first thoughts be supposed. On the answer hinges

the decision as to whether music can play any useful part in medicine. All my observations tend to show that in music we have one of the most powerful and most neglected of practical remedies. At the same time, however, its method of action is so little understood that it is capable of working harm when unwisely used. Harm can be wrought on the mind and character as much as on the body. The subject is so wide that it is impossible even to mention all its aspects in one article; I deal with some of them, in popular terminology, in a forthcoming book, "Music, Health and Character."

To confine the present remarks to some of the physical effects of music. During the administration of electricity to the human body, I have noted with interest that the passage of a mild galvanic current down the spine, in some people, produces sensations very similar to those occasioned by music. This holds true only of a minority of individuals who, I presume, are more "nerve-sensitive" than the majority. Neither electricity nor music conveys those nervous sensations in the normally balanced or the average individual.

Throughout history we find mention of the beneficial action of music upon certain diseases. Doubtless to the modern, scientifically trained point of view many of these cases bear the appearance of faith healing, and many of the maladies would, under critical examination, be recognised to belong to the category of nervous or hysterical disorders. To-day, however, the up-to-date physician realises the value of faith healing in a certain type of case; and that a disease proves to be of functional, rather than of organic origin, does not render its cure less imperative or less difficult. Hence the good results of the treatment by music which are cited throughout past centuries must not be dismissed as unworthy either of credence, or of consideration, merely because it is impossible at this distance of time to submit the maladies and their alleged cure to examination by any rigorously scientific method.

In Greek literature there are frequent references to the value of music as a healing agent and for the training of character. In at least three works Theophrastus alludes to the benefit of flute-playing for sciatica, especially when played in the Phrygian mode (i.e., a spirited air). Democritus likewise bears testimony to its value for pain. Later, Aulus Gellius, writing in the reign of Hadrian, also recommended it for sciatica. Many writers, both in ancient times and in the Middle Ages, describe the healing value of music for serious bites and stings. Justus Hecker, writing on the "Dancing Manias" of the Middle Ages, testifies to the fact that music was the sole agent which

^{*} Mr. John Lane hopes to publish this in the autumn.--Ep.

could influence the condition favourably. From old Italian records, he quotes detailed descriptions of the healing influence of music on the victims of serpent bites. Eye-witnesses describe how these cases of collapse were restored to life by music, its rhythm and intensity being varied according to the degree of shock. It was noted that false notes appeared to retard recovery—an observation which is in keeping with the statement of a modern psychologist, who observed that patients who, in their normal state, were indifferent to music, would during the hypnotic sleep manifest discomfort on hearing wrong notes. Doubtless, from these descriptions, one is justified in concluding that the paralysing effects of the bites were due to fear; in spite of this conclusion, the remedial benefit of music, after the failure of other agents, is rendered none the less interesting.

Between the seventeenth and the twentieth century there are many references in Europan and American medical literature to the use of music in medicine. They form interesting and sometimes amusing reading, but I have found little that would bear the scientific scrutiny of to-day. I shall therefore mention the work of only a few of the more recent writers. Over twenty years ago there appeared several articles in our medical journals dealing with the subject of music as a healing agent. Two articles were written by a Dr. Davison and a Dr. Dixon, and the interest aroused by the subject gave rise to a correspondence at the time. Dr. Dixon described how he had found that quick, lively music improved melancholia and low vitality, whilst a soothing type of music aided night-terrors, delirium and high blood pressure. Simple popular tunes, frequently repeated, brought about a condition of nervous irritation. He referred to the good influence. long recognised, of music in cases of mental disease. Both Dr. Davison and Dr. Dixon confirmed the observations of the ancient Greeks as to the value of music in cases of painful disease. Dr. Ewing Hunter wrote describing the benefit obtained by music in his hospital wards in Scotland, especially for cases of pain and insomnia. After experimenting with various instruments, he found the best results were produced by the lyre and the harp.

As these articles alluded to the scientific work of Dr. Dogiel in 1880, stating, quite simply, that he had proven that music altered the blood pressure in men and animals, I looked up the original work of this German experimenter. It was as painstaking as is much German research and, equally, was marred by a lack of proportion. He worked with a plethysmograph, attached to the arm in human subjects, to the neck in cats, rabbits and dogs, and he measured carefully the alterations in blood pressure and rate of the heart whilst various

instruments and notes of different pitch and strength were sounded. Unfortunately, most of the experiments were carried out for a period of time measured only in seconds. He proved that the pressure and rate were influenced, that the changes were greater with loud than with soft music, and that they varied, in the same individual, with the pitch of the note. All these circulatory alterations were exaggerated when the subject of the experiment was under the influence of strychnine; they were diminished when under the influence of sedative drugs such as morphia. The fact that in all these experiments the music was played for so brief a space of time reduces the value of Dogiel's observations. They can give no true record of what happens in ordinary life when a man listens to music in a concert lasting half to several hours. Dogiel also made an error when he concluded that the results of music "varied with the nationality," giving as an example a Tartar servant, whose circulation betrayed a marked change when a bar from one of the airs of his native country was played. Obviously, that result was due, not to the sound, but to the idea aroused by hearing such music in a foreign land.

Far more valuable, and more in relation to normal conditions, was the research of a Frenchman, Dr. Xavier Verdier, published in 1903. He first of all made sure that the subject became accustomed to the novelty of a recording instrument on the arm, and that all disturbing influences were eliminated during the time of the experiment. Music was continued over varying periods of time, and the compositions were carefully selected. It was found that the physical changes varied according to the type of music played, according to the subject's familiarity with or ignorance of the music, and according to the rhythm and tempo of the music. He proved that music dispelled fatigue and aided work; also that less work was accomplished with allegretto movements than with allegro maestoso and militaire, largo and andante movements. Great care must be taken, he found, in the choice of music suitable for the individual case, especially those of a nervous and mental nature. The individual needs required study before treatment by music was undertaken. In 1918 two American physicians carried out careful tests with modern scientific apparatus for the recording of the circulatory changes induced by the music of gramophone orchestral records. They found the changes were much greater in those who appreciated the music, and came to the conclusion that music might be usefully employed for the treatment of mental and other disease provided that careful preliminary study was made of the reactions of the individual.

The subject, from a scientific standpoint, is yet in its infancy. Enough has been said to show that my first and quite independently

formed opinion, that music could produce invigorating effects on the human body as well as on the mind, has already been proved by several scientifically carried out investigations. These experiments above quoted proved that, like every other healing agent, music demands study before it can be prescribed for an individual case. The fact that individuals react differently to music, and that the subject is complicated by a psychic or emotional factor, is no reason that it should be neglected by the physician. The action of many drugs varies with the individual. The psychic and emotional elements responsible for many of the popular "cures"—whether they be by "faith," by mental or quack healers—have not been unobserved, and their results, though less advertised, have been frequently surpassed by the psychologists within the medical ranks.

In pre-scientific days, and even to-day in primitive races and in uneducated or simple communities, incantations succeed in curing disease. These act doubtless in the same manner as the method of reiterated suggestion, long known to mental specialists and made popular within the past year or two by M. Coué's convincing phrases. Sounds with a definitely marked rhythm, such as the monotonous beating of the drum in Dervish rites and other Oriental and African native ceremonies, lulls, almost to a hypnotic sleep, the conscious self. Any gentle, rhythmic sound can produce a similar effect. Thus, for example, as was pointed out by the American physician, Boris Sidis, the ticking of a metronome can induce in a patient a state of passivity which makes him as susceptible to suggestion as if he were deeply hypnotised. I have frequently found patients who were reclining in a comfortable chair sent to sleep by the hum of the electrical apparatus in the room. Now, in order to produce this condition of repose, mental and physical, the factor of prime importance is that the sound must be of regular rhythm. Sound of irregular rhythm first excites, then irritates, then fatigues the nervous system. Sound of regular rhythm, if gentle, induces refreshing sleep. Rhythm has deep-rooted significance in nature. Regular rhythm appears to correspond with some need of the body. The heart and lungs, indeed all the organs, work with a regular rhythm. It is to this cause, in my opinion, that the beneficial influence of music with a definite rhythm is due. It is from the same cause, in my opinion, that irregular and defective rhythm leads to a condition of irritation, unrest and fatigue. In these facts lies the explanation of the value of the incantations used amongst the ancient Egyptians, Indians and Greeks, and even to-day amongst some primitive tribes, for the treatment of disease. The patient, by slow, monotonous rhythmic sound is lulled into a passive state or a hypnotic sleep, in which all suggestions of health take powerful effect.

When the rhythm of the body is disturbed, whether from physical or mental causes, disease makes headway. In civilised communities it is too often found that anxiety and overwork on the one hand, defective air and exercise on the other, lead to disturbance of the natural rhythm. Recent research into the subject of industrial fatigue has proved that when work is performed with regard to the laws of rhythm the output is increased, and at the same time the fatigue of the operator is diminished. Here, or so at least it appears to me, we have the explanation of the fact that the music of the older masters, with its definitely marked rhythm, has so healthy an influence, mental and physical. Their regard for rhythm is probably the explanation of the immense popularity of such music, even amongst those without musical education, and therefore unable to explain the reason of its strong attraction. Slow, soft, rhythmic music conveys repose and peace to the distracted mind, and by relieving nervous tension, diminishes (even banishes) pain, has a health-giving effect upon the circulation, and hence upon the entire body. Vigorous, spirited rhythmic music tones up the jaded mind, and by quickening the circulation, inspires a healthy courage and desire to be "up and doing." No type of music does more to dispel ennui, listless brooding and introspection.

Some varieties of modern music, to my uneducated ear, appear to have an obscure, even irregular rhythm. Imitations of natural sounds, cries of men or animals, build up a composition which corresponds to realism in literature. Whilst the defective rhythm disturbs the tranquillity of the circulation, the intellect, occupied in judging the inadequacy or the success of the realism, deprives the mind of the capacity for joyous emotion, that supreme gift bestowed by the older and rhythmic works of music. This brings us back to the starting point, the emotions of the lizards and elephants of Dr. Chomet's day. of the animals so fascinatingly depicted in the Orpheus myth. What is emotion, and what are its physical manifestations? When the material movements of the sound waves reach the nerve of hearing and pass to the brain, how are they there transformed to musical sounds, which convey meaning to the self? There we reach the region of metaphysics, and however deeply the philosophers penetrate, they can never succeed, through the instrumentality of the mind, in determining the nature of the mind. That part of the question is unanswerable. Musical sound reaches the brain, is recognised by the intellect, and its value to the self is expressed by the emotion it arouses. One note, standing by itself, conveys as little, apparently, as an isolated word. Notes in succession fall into place as the words in a sentence, and the sentences in a page. Emotional physical manifestations follow, as

readily detected as are those caused by sentences charged with emotional significance.

Broadly speaking, emotions can be divided into two opposite types: the expansive and the contractile. The expansive emotions cause quickened and stronger heart beats, increased rate of breathing, widening of the blood vessels, brightening of the eyes, increased action of the glands and flushing of the skin. The expansive, outgoing emotions—serenity, joy, courage, aspiration—are accompanied by these physical manifestations. The contractile emotions—fear, anxiety, worry, depresion—are accompanied by a contraction of the blood vessels, pallor and coldness of the skin, and slow, laboured heart rate. The expansive emotions make for health, activity and usefulness; the individual has a fuller, happier, richer life. The contractile emotions make for lowered vitality, disease, and melancholy; they narrow the sphere of life possible to the individual.

All such physical effects can be produced by music. The altered condition of the heart and circulation, the pallor and flushing—all are described, for that matter, in the biographies of many of the musicians. Excessive or undisciplined indulgence in emotion leads to fainting fits, stupors, convulsive attacks, with or without accompanying depths of anguish or ecstacy; all these tend to bring about permanent abnormal conditions of both mind and body. Certain musical works encourage this harmful degree of emotion; physicians know the evil effects of such music on the circulation and organs of delicate individuals with a sensitive nervous system.

Great literature and great music, which stand the test of time, are never of the type that produce fear, melancholy, pessimism or unbridled emotionalism of a self-centred type. The literature and the music which endure, which attract all living beings through the centuries, belong to the variety which communicate the health-giving, expansive and idealistic emotions. Under the influence of great music a man finds that the obsession of sordid cares fades away; their true insignificance is revealed in the presence of the high emotion which raises him above the limitations of his own personality. Such fine emotion is accompanied by the healthy physical manifestations already described. So once more is the truth borne home that the agents which are productive of joy and peace in the mind are those which are likewise productive of health in the body. Hence the conscientious physician can prescribe music for the patient just as confidently as he prescribes other natural health-giving agencies, such as fresh air, exercise and the beauty of nature in country hills and vales.

AGNES SAVILL, M.D.

REVIEWS OF BOOKS

Encyclopédie de la Musique et Dictionnaire du Conservatoire. 1re Partie. Fifth volume. By A. Lavignac. Delagrave.

The fifth volume completes the first part of this huge work, which treats of music by countries. The second part will divide music into three dozen different subjects under the general titles of Technical, Educational and Æsthetic. This fifth volume completes the series, begun ten years ago in the first, of extra-European countries. Since there is no space adequately to review what is said of eighteen Oriental countries, it is thought better to confine comment here to two of the essays—on India in the first volume and on Turkey in the fifth.

India.

The author, M. Joanny Grosset, is entirely to be trusted in all that he says about the Sanskrit texts and their subject matter, and these texts are of first-rate importance—the Nātyaçāstra (5th cent.; M. Grosset says the 1st), the Sangīta Ratnākara (1210-1247) and the Rāgavibodha (1609; he gives 1608). He has himself translated the Nātyaçāstra, or, at least, the most valuable chapter of it (Lyon, no date, but previous to 1894), and he here extracts considerably from the Ratnākara. A translation of this is long overdue, or, failing that, a summary with exact references; for with a Sanskrit book some of us are apt to waste a good deal of time in finding out what it is talking about, and, perhaps, finally settling that that is not what we were looking for.

A still greater difficulty is, having found the passage, to determine what it exactly means for Indians write their books, at any rate their treatises, as a kind of algebra. They also catalogue and tabulate luxuriantly, far beyond any practical needs, and interchange myth and fact so freely that the lines of the structure are quite obscured. This necessitates a firm hold on the technical side of the su'ject, and it is here that M. Grosset's book and essay both fail. He has marshalled the data well, but there he for the most part leaves them with their discrepancies unreconciled and their conclusions undrawn. With two of his actual conclusions we are unable to agree.

With their scale names (Sa, Ri, Ga, etc.) the Indians named primarily neither an absolute pitch (C, D, E) nor a relative pitch (Do, Re, Mi), but something for which we have no names—the intervals between the successive (relative) notes. They transferred this name to the note on which the interval started. Now the old scale was vocal, and like all vocal scales was conceived downwards, as is shown among other things by the numerals of the Samaveda (by which Sa is D)—

1	E.	E		D		C	
1st		2nd		3rd		4th	
Ma	G	1	1	Ri	-	Sa	Ni

But instrumental scales are for obvious reasons conceived upwards; and as the vina (guitar) is as old as Indian literature (and therefore fifteen centuries older than the earliest musical treatise), the names in that treatise are those of the instrumental scale—

C D E F So Ri Go Ma

and that scale began not, as M. Grosset thinks, on our D, but on our C. Of course it makes a vital difference to all that is said about the music which way this scale is taken.

His other conclusion is that all the quarter tones (cruti) are equal. Europeans have frequently said this, but no Indian treatise does. It is a wrong inference from the commentator on cloka 25 of the Natyacastra. That passage says that Sa has 4 crutis, Ri 3, Ga 2 (and others correspondingly), and that in one particular case one single "indicative" cruti is employed. From the use that is made of it in this one case, it is clear that this indicative cruti is what we call the "comma"; but Sa, which is equally clearly the major tone, would then consist of not four but nine crutis. The crutis are therefore not all equal. They are, in fact, of three different sizes, though that does not matter to us now. But to assume them equal, to call them, as he does, all 55 of an equal semitone, is to assume Equal Temperament for the Indian scale; and that is out of the question.

With these two reservations, if you decide that they ought to be made, the article, which is half as long again as a number of this magazine but most compact, is an excellent summary of all that was known in 1913, when it was written, and gives much from sources not hitherto available.

A. H. Fox Strangways.

Turkey.

Although his title is La Musique Turque, the author, Raouf Yekta Bey, proposes to give a sketch of all the Near East, i.e., of Arabic and Persian as well, because one of his points is that there is, in fact, no difference between them—rather a bold statement. What he really means is that the theory is alike because the common language of the theorists is Arabic. But there is, also, a kind of uniformity, because they borrow from each other, and all from the Greeks.

The paper (the same length as that on India) is in two parts—theory, extending beyond Turkey, and practice, which applies only to a narrow district, namely, the art-music of Constantinople.

He wants to say that there is only one "natural" theory of music in the world, of which all Oriental systems are facets, but Europeans are outside it because of their adoption of equal temperament; and this feeling finds vent in constant polemics against European music and musicology, as far as his subject brings him in contact with them. He entirely ignores the German and English investigations which followed Ellis's lead, those namely which are based on observed fact. It is typical that he spends much of his force against Rousseau's dictionary. His court of appeal is always the musical sense, and yet his actual scales are purely matters of arithmetic; he does not seem able to get beyond this dichotomy. His mind is still in the eighteenth century. He desires everywhere to impose a theory upon facts, instead of

observing them and trying to account for them—rather like Lessing when he told the French dramatists what they ought to have written.

His picture of Turkish music is thorough: he treats of melody (maqāmāt, modes), instruments and rhythm. The melodic examples are interesting. They are all taken from books—it is part of his attitude that the book is right, and that ordinary performance is an individual aberration from the norm. Such examples as he gives are of the best kind. They are interesting just because it is an Oriental who has chosen them and because we are guaranteed against the blunders that are not unknown in European transcriptions. He chooses the European notation without understanding why it needs to be so accurate; but, of course the tunes are, in practice, never executed up to that standard. The European can note usefully a particular variant, but the Oriental can summarise, which is useful in another way.

There is a full account of instruments, more valuable for the theory of tuning than for the practice; and this is based on the extensive sources that would be open to the Librarian of the State Library, who

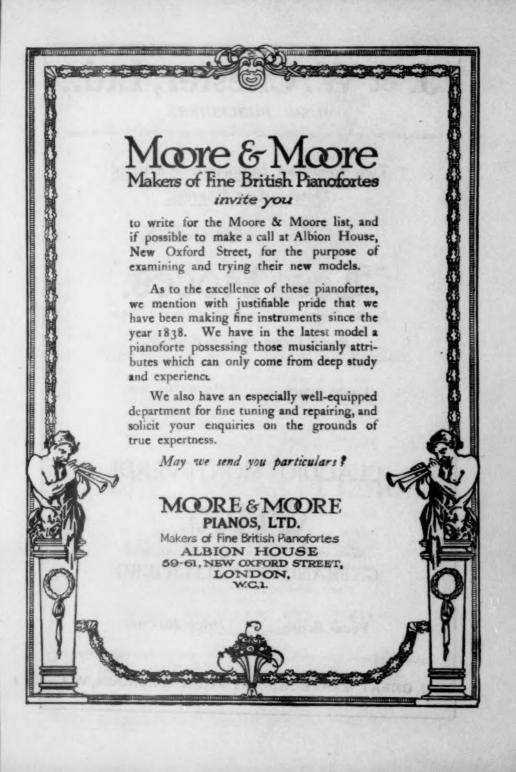
has also a large and rare collection of his own.

His rhythmic notation is useful because the beats are given along with the tunes and the treatment is complete. But he gets as little beyond the mere phenomena to the principle involved in rhythm as he does with regard to the maqāmāt, of which he gives a list in a mechanical and not a logical order. When he comes to the individual maqām, the characteristics of which an Oriental conveys by a timeless extemporization, he has the ingenious idea of meeting our ignorance halfway by putting this extemporization into waltz time.

ROBERT LACHMANN.

The Heart of Music. By Anna Alice Chapin. Methuen & Co.

This is the dock that grows by the nettle, the gardener's, not the botanist's flower, the peaceable fruit that hangs on the tree of knowledge. The story of the fiddle is set forth as a theme, and indeed some pages are devoted to the luthiers and a chapter to Stradivari; yet it it not for these that we shall put the book on a shelf within easy reach—for these facts we shall get on a chair and stretch up for Heron Allen. But we shall turn to those other pages where Kalidasa lives five centuries before his time and the Greeks accidentally conquer the Romans instead of the Persians and get Simonides to sing of it, where the pandoura is derived from the tamboura and the Chinese scale has eighty-four notes instead of twelve, and where positive statements fill the vast lacunæ of myth in a way that would turn "the wise men's "hair grey. For these are industrious webs of fair workmanship, and the wise men's statements are but the sticks and stones of fact between which they are spun. And we shall turn to those pages because they tell us that man does not make music so much as music makes man, and that much knowledge of the things and the people who make them is not so good as a little love of music for its own sake.



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GOOD THINGS -

Mr. A. H. Fox Strangways has again produced a number (April) full of good things of his quarterly Music and Letters, which is now in its fourth year and promises to upset the established theory that a serious musical review has small chance of long life in England. There have been several gallant ventures of the sort in the past. Anyone who happens to turn up the London Harmonicon of 100 years ago will find in it good reading still. Thirty years ago a promising Musical Review lasted less than a year. Prof. Granville Bantock edited in the 'nineties an excellent New Quarterly Musical Review, and in Charing Cross Road one may sometimes pick up copies of the Chord of 1899-1900, which lived a brief life brightly.

After that the particular field was vacant till Mr. Fox Strangways in 1920 stepped in, with the advantages of a well-stored and witty mind. In his disinterested undertaking he ought to have the support of all the musical, so that English music may continue to boast its handsome equivalent of the New York Musical Quarterly and the Paris Revue Musicale of M. Henry Prunières.—Daily Mail, March 6th, 1923.



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